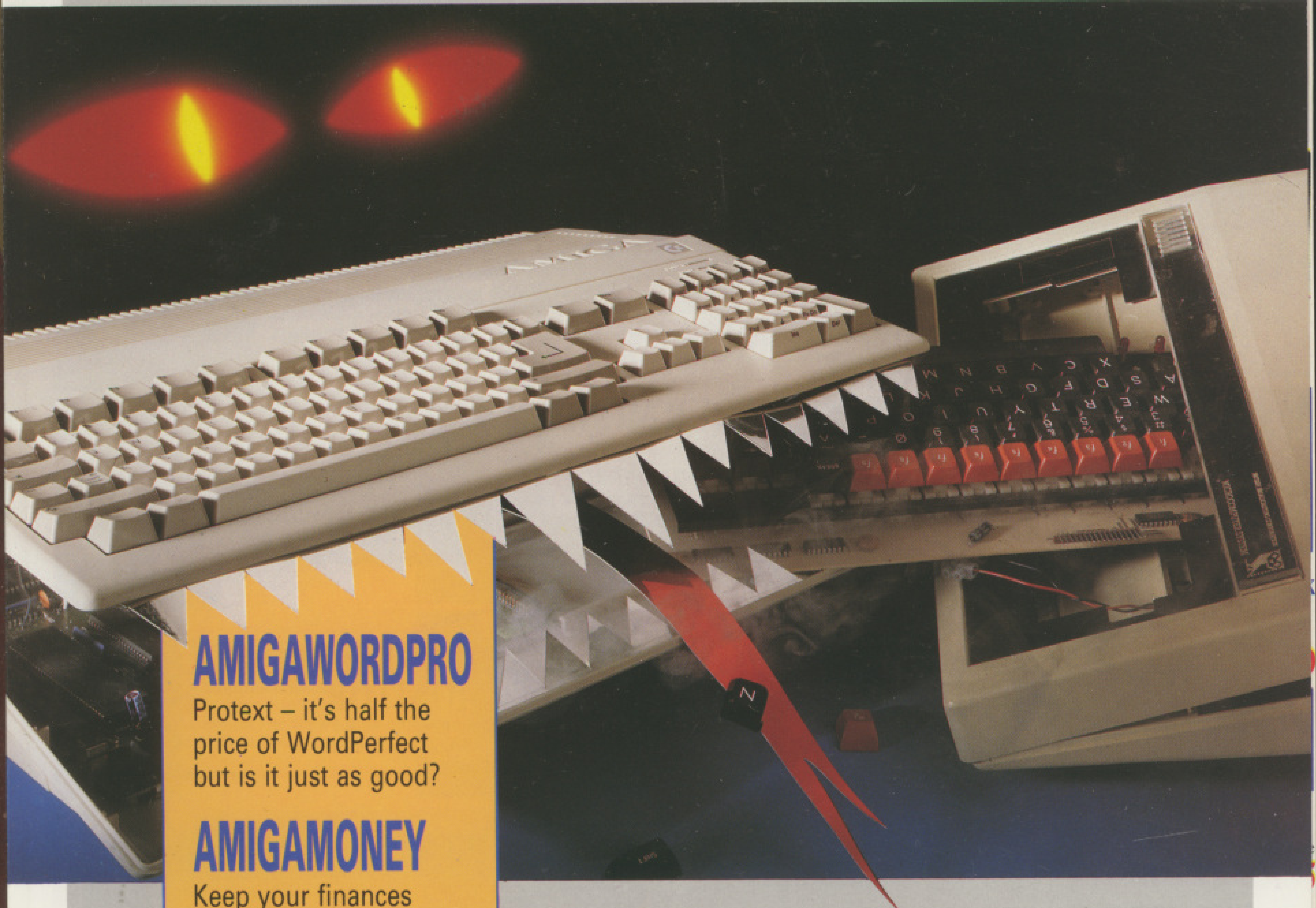
Volume 1
Number 8
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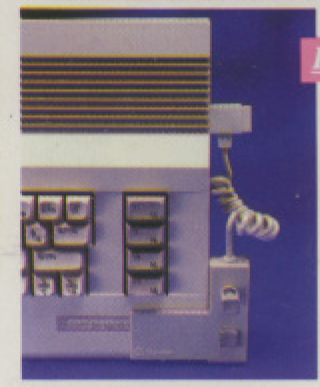
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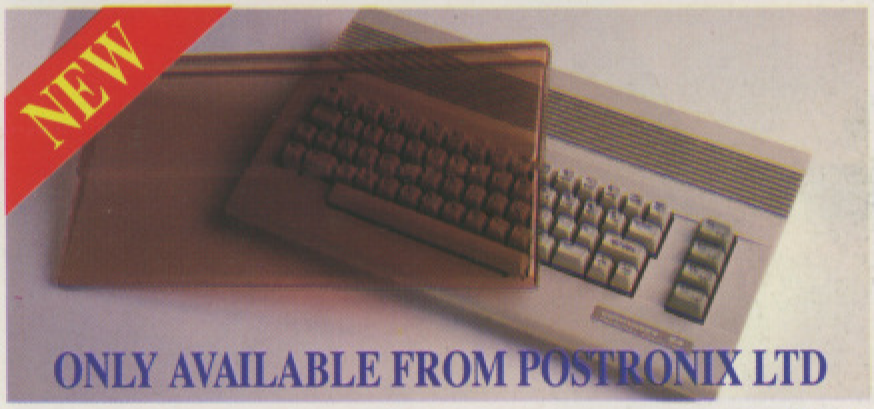
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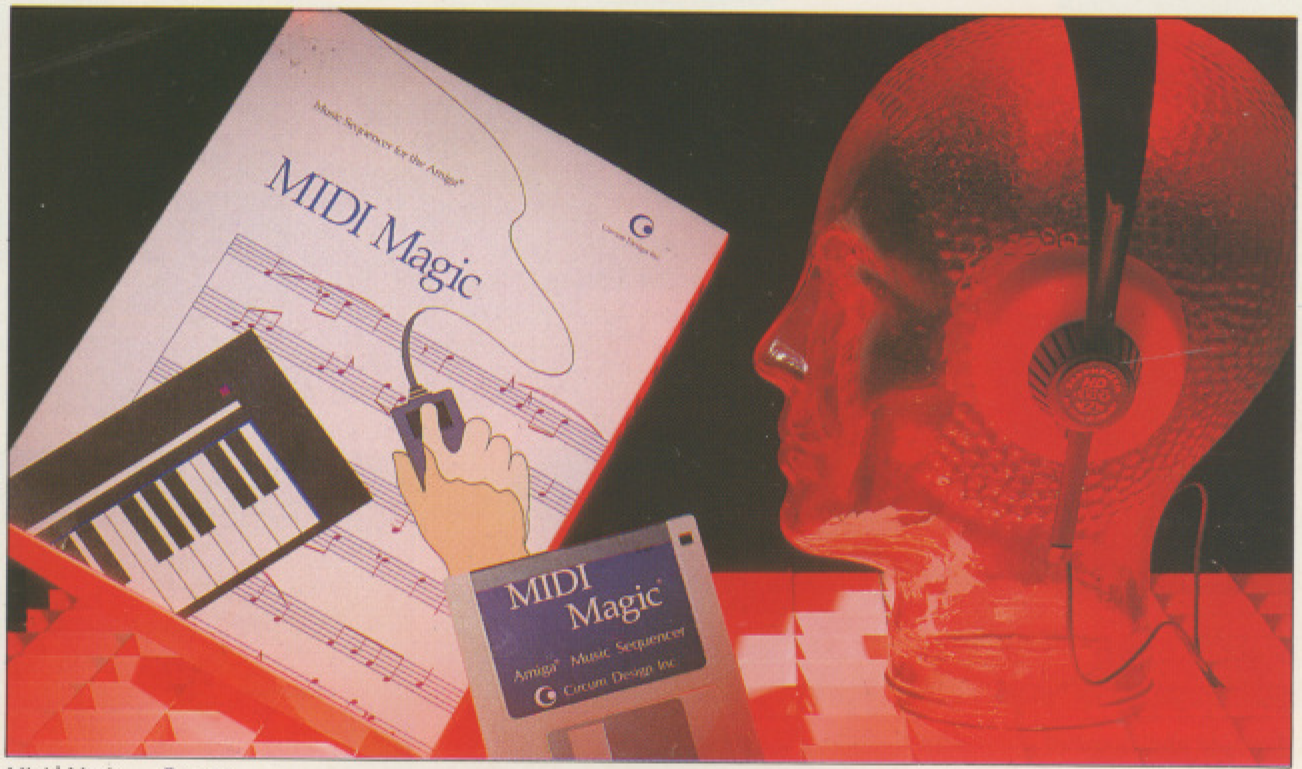
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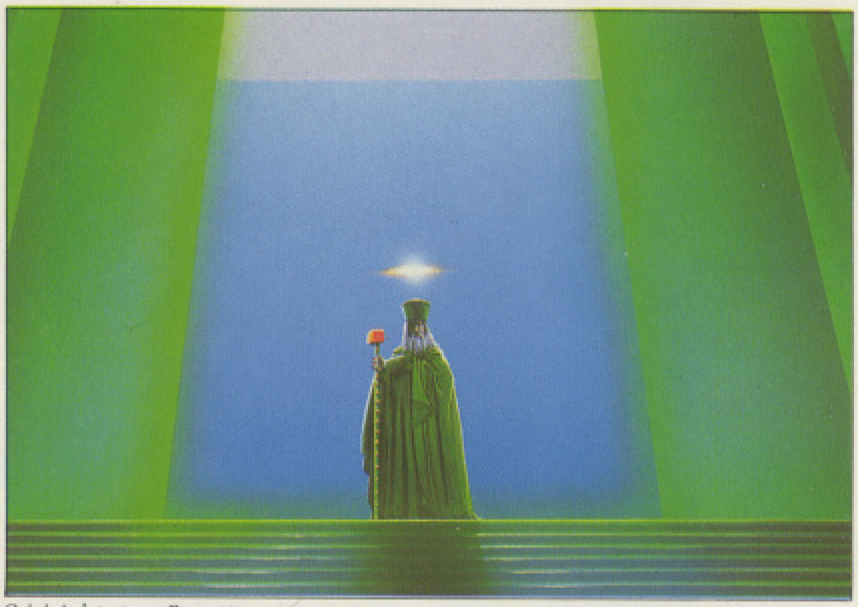
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AMIGA SCENE

Commodore appoints education supremo

A FORMER Atari executive has been recruited by Commodore to spearhead its growing impact on the education marketplace.

Bill Owen, who becomes sales manager for education, was won over to the Amiga at the Hanover computer fair in Germany.

Owen first came across the machine when he was working for leading distributor SDL.

He told *Amiga Computing*: "I was convinced that 68000 machines were right for education but there was not enough good software around for the ST.

"What I saw at Hanover convinced me that the Amiga outstripped the ST's capabilities in education, both in terms of software and flexibility in the classroom. It will be good to be working with a company that is really committed to education".

Owen worked for Atari as a regional sales manager, was head of Eltec's public service division specialising in education, and then was national sales manager for SDL in its corporate and education division.

Commodore's sales manager for education, Peter Talbot said: "I believe this appointment is a clear statement to the market that Commodore is committed to the education sector".

Amiga sales success story

Commodore is one of the success stories of the year. It is clearly emerging as Europe's second largest supplier after IBM – according to a leading research organisation.

Dataquest's European Monitor reports Amiga sales are booming and Commodore's PCs are increasingly finding favour in the business sector.

"Commodore is obviously riding high", commented Dean Barrett, the company's UK marketing manager.

"Worldwide, our first quarter profits to September 30, 1988 were up 92 per cent to $9.6 million on the corresponding quarter for 1987.

"The Dataquest figures are further proof that Commodore is taking control of the home computer market and advancing strongly in the business sector".

Awards for Mirrorsoft

THREE best-selling games from Mirrorsoft – Tetris, Dungeon Master and Falcon – have won honours in Europe.

In Paris the programs captured four Tilt d'Or awards – the highest number received by any software publisher – from France's biggest circulation computer games magazine. Tetris was voted Best Strategy and Best Original game, while Dungeon Master was voted Best Role Playing game and Best Animation.

Germany's leading entertainment software magazine, Happy Computer, had earlier given its Best Concept award to Tetris and Best Adventure to Dungeon Master. Falcon was voted Best Simulation.

Train as a commando

AT a secret location within a dense forest lies one of the world's toughest schools, where commandos learn their trade. That's the scene in Action Service, from Infogrames (01-364 0123), soon to be released for the Amiga priced £19.95.



Taxi out and scramble

FLYERS, including the chief test pilot of makers General Dynamics, were consulted during the writing of F16 Combat Pilot.

The new simulation from Digital Integration (0276 684044) will be released on the Amiga shortly. It follows each mission from the crew room through to post-mission debriefings.

Players get to pilot one of the most advanced multi-role fighter planes in the US armoury through its five major roles – air defence, battlefield support, offensive counterair, interdictor strike and reconnaissance.

F16 Combat Pilot simulates all these activities, from scrambling and desperate dogfights to tank-busting battle support.

Digital Integration director Dave Marshall (third from right in the Digital team above) said: "We are very grateful for the assistance we received from General Dynamics and F16 pilots – our game is the closest you can get to flying this awesome aircraft"

Developing in Germany

COMMODORE - Amiga Technical Support (CATS) is to hold a second European Developers' Conference. The first conference was held two years ago in Brighton, but as the aim is to take in all European programmers the second meeting will be held in Frankfurt.

All the discussions will be in English, with talks from the Amiga design team which will be flying in from Los Gatos, the Californian birthplace of the Amiga.

It is aimed at professional developers, so if you think a long word is something like sesquipedailian, you would be better off skiing. And as the conference is to be held in January you might get the chance.

Power from a compiler

AMIGA users can now fully exploit the power of their machine without having to learn another computer language.

Hi-Soft Basic is a new high specification compiler/editor which takes Basic programs and converts them into super fast machine code within an easy-to-use environment like that of the Borland Turbo products for the PC.

Following the world standard Microsoft Basic, as well as compiling Amiga-Basic interpreter programs, it also greatly extends the language to include many features from QuickBasic for the PC and HiSoft Basic for the Atari ST.

Additional language features include full recursive sub-programs and functions, parameters passed by value or reference, and flexible looping constructs.

HiSoft Basic supports all Amiga library routines; programs can be as large as memory allows, strings can be up to 16Mb in length and arrays any number of dimensions. Price £99.95 from HiSoft (0525 718181).

Amiga practically stole the show

IT used to be called the Pet show, when Commodore's Personal Electronic Transactor was king. Then with the rise of the Commodore 64 to become the world's best selling home computer the "proper" name of The Commodore Show took over.

After hearing one C64 owning visitor complain that there was nothing new for her machine, it probably won't be long before we all start calling it the Amiga show.

Still the Commodore Show it remains, and this was the Commodore *Christmas*, so it snowed on the Sunday. Shows at the Novotel have always seemed split between the bargains in the basement and the posh lot upstairs.

The big news from Commodore was the BBC Emulator, but there was no sign of the new hardware it has shown in the US. Commodore seemed genuinely pleased and surprised in the interest shown in the emulator and announced a January 12 launch date.

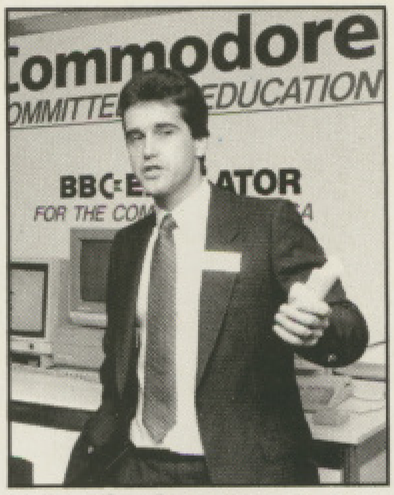
Digita launched two new products in its range of small business programs, Day by Day – a simple diary – and E-type – a "typewriter emulator", which sounds like an excuse for a word processor. Expect reviews in *Amiga Computing* soon.

Basic seems to be an up and coming language with Microdeal previewing GFA Basic and HiSoft demonstrating its compiler. Neither language was finished, but both seemed pretty comprehensive.

HiSoft seemed to be doing a roaring trade in cut-price Devpac assemblers and the new Devpac II, as well as answering techie questions on the merits of various C compilers.

Mandarin was demonstrating Time and Magik, Lancelot and Pioneer Plague. While the adventures were pretty much ignored it was PP which drew the crowds, many of them asking what had happened to the Lombard Rally game. It was due to be finished on the Monday after the show.

Up market company Microway showed why the Flickerfixer is worth £300 but refused to say anything about the possibility of an Amiga 500 version.



National sales manager Peter Talbot heralding Commodore's educational drive

Video add-ons were very much in evidence. A couple of stands were showing the Mini-gen £99 genlock and Rendale had a slightly more up-market device for a shade under £200.

Pam Smith from Triangle Television was showing some very exciting video hardware including a Hitachi video printer which dumps screens from RGB on to a special paper, and selling a tape of video effects produced using an Amiga and various video gizmos.

Tony Sellinger from Pure Graphics sold out of his CombineR. GB units which take and split an RGB signal so that you can use DigiView without needing the filter wheel.

Two teletext adapters were on show, one from Solidisk and a much more impressive device from Microtext which follows Commodore guidelines to the letter. It will be reviewed soon in *Amiga Computing*.

The people from Microtext were very patient, having a stand next to Ariadne which was showing a pre-production version of Opus 1, the music language.

Perhaps the Microtext people didn't need to be patient because the sounds emanating from Ariadne were really pleasant – a great selection of jazz and classical tracks using sound generated by Paula and a crowd of Midi boxes.

Simon Cobb from Siren Software was making a lot of noise with Soundblaster, a device which plugs into the phono connectors and a pair of speakers to deafen the neighbours.

Precision Software gave demonstrations of its products on a big screen TV, including the first games in the range from Mindware in the States and the latest versions of Superbase and Superbase Pro, the best database programs for the Amiga.

You had to queue to spend money with Silica Shop. There was some interesting software, for example Who framed Roger Rabbit on special US import.

The bargains continued at HB Marketing which was selling ComicSetter for under £50 and showing a stupendous demo of a Star Wars AT-AT walking past an Amiga 2000 running on a 2MB A500.

But for real bargains you needed to go downstairs. Super-slim second drives with a disable switch for £75 from Evesham, really cheap discs from Centec and a wide range of C64 and Amiga goodies from Postronix.

AUG and ICPUG both had good shows, the latter celebrating its 10th birthday, and it was good to see an historic computer on its stand.

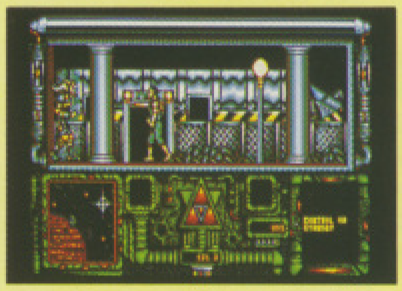


Driving ambition

CRAZY Cars II is under development in France by Gil, the top programmer at Titus Software which claims that this is the road game which does the things which other driving games fail to do, complete with cars that spin and a road which splits at a fork.

It features the fastest Ferrari ever, the 200mph F40, doing battle with the police and collecting speeding tickets.

First out of the Chrysalis



NEW software house Chrysalis (0709 370102) is releasing its first game for the Amiga this month. Prison, based on a penal colony planet deep in space, is pure escapist entertainment in more ways than one.

The player must search a series of screens for clues to the location of a hidden spaceship which is the only means of escape from the planet.

Programmed by Michael Hart, with graphics by Jason Wilson, Prison will cost £19.95.

Chrysalis has emerged from Teque, the development house responsible for such titles as Terremex and Pac Mania. "Consequently the company differs from other software houses as it is product rather than marketing orientated", said a spokesman.

Hot on the scent

AMIGA owner Ian Robertson, of Tooting Junction, London, has reached the final of the Mandarin Software competition to win a £5,000 replica of the Holy Grail.

Using his Amiga, Ian has come up with a possible location for the replica which is buried somewhere in Britain.

He is one of the first nine finalists to be named. A further 27 will come to light in three more stages of this national treasure hunt. It was devised by Mandarin (0625 878888) to coincide with the launch of its latest title Lancelot, based on the legend of King Arthur. All clues to the whereabouts of the Grail are in code within the program.

Hand crafted in solid sterling silver, the goblet is gilded inside with 22 carat gold and encrusted with amethysts, garnets and opals.

Along with other finalists, Ian will now take part in a play-off in February.

Vanquish a vampire

NEW Amiga entertainment software was previewed at Comdex in the USA by Microdeal (0726 68020).

Arcade adventure Fright Night is based on the film and gives players 12 hours to wipe out the vampires or become their victim.

International Soccer has nine difficulty levels, digitised sound effects and hi-res graphics. It can be played using Microdeal's four-player adapter.

Microdeal also showed its AMAS advanced midi Amiga sampler, an 8 bit stereo digitiser with a full implementation Midi interface.

And, from Michtron, it had VTX on line for the Amiga – described as "the ultimate in telecommunications packages for Amiga owners" – plus VIVA, Visual Interfaced Video Authoring, software combining video, sound, colour and graphics.

Here there be dragons

FULL eight way scrolling is featured in Dragonscape, the latest offering from Software Horizons (01-348 4577) for the Amiga. Due out next month, priced £14.95, the shoot-em-up action game includes wacky puzzles and elements of strategy involving dragons and mystical lands.

Fax service facilitated

MICROLINK subscribers have been spared the problems reported by users of Telecom Gold's new fax service Mailfax.

Because Mailfax bewildered many people, up to 30 per cent of messages were being addressed to invalid numbers.

But MicroLink (0625 878888) has come up with a simplified method for using the facility – called Easy Fax.

"People were being asked to key in all sorts of different sequences in order to send fax messages", said MicroLink systems manager Tim Clarkson. "Even I found Mailfax difficult to use. But we've re-written the front end of the program for our own subscribers – now all they need do is type in the telephone number of the fax machine they want to send their message to".

At the same time, MicroLink has introduced Fax Check – a method of seeing whether messages queued for transmission have been sent or not.

"The whole principal behind using electronic mail for faxing is to make it as easy to use as possible", said Derek Meakin, head of MicroLink.

"We feel that with Easy Fax and Fax Check as add-ons to the Telecom Gold fax gateway, we've managed to get it right for our subscribers".



Staffing signals Amiga success

JIM BUTTERFIELD reporting from Canada

AUTUMN has been showtime for Amiga fanatics. AmiExpo in Los Angeles was poorly attended, but developers were out in strength. Some West Coast software houses expressed unhappiness when Commodore indicated that it was acquiring ARP, the Amiga Replacement Project system pioneered by Scott Ballantyne and Charlie Heath.

Many users are pleased with the ARP system, but that opinion is not unanimous, at least not yet.

In contrast, the first World of Commodore of the season, held in Philadelphia, was mobbed by enthusiastic users. Perhaps the most encouraging sign of all was that Commodore had set up a booth whose specific purpose was to hire new employees. Seems like a sure sign of Amiga success.

Commodore saved its new product displays for the Comdex show. They included such items as the 590, an Amiga 500 expansion unit that comes with 2Mb of expansion ram and a SCSI controller for hard disc.

Reports from the show also tell of the AT board, the Unix-style system and (perhaps shown behind closed doors) the Amiga transputer, a system that includes networking.

David Klein, formerly of Electronic Arts, is now a Vice President at Commodore. At EA he headed the 64 games division. At Commodore some observers view his role as VP of game machines.

Industry guessers wonder if a new machine is on its way using Amiga custom chips. It wouldn't likely carry the Amiga name, but I suspect that there would be no mistaking those great graphics.

Interest is growing in messaging systems, which allow information to be passed in a standard form from one program to another.

Commodore has indicated that it might standardise on AREXX. Another contender is IPC, a protocol developed by a group of UseNet programmers.

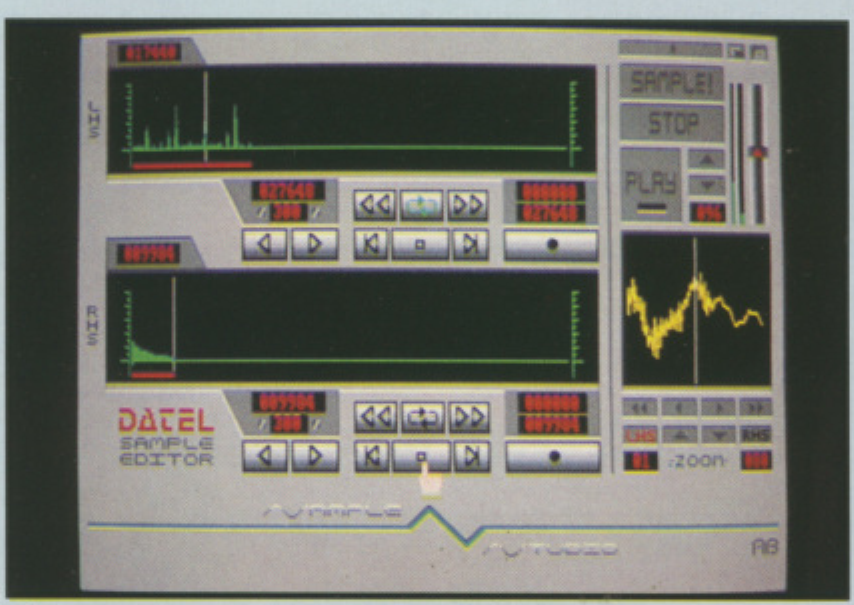
The network discussions continue to be fast and furious. Systems programmers see the need for such systems, whereas most general users don't relate to them.

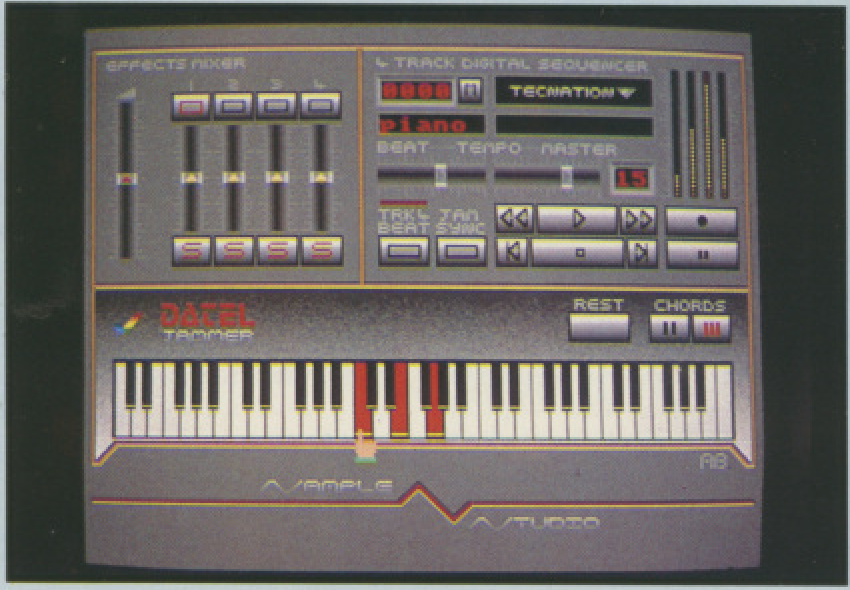
WordPerfect Corporation has a high reputation for supplying user updates for its word processor. This summer, the company outdid itself. By mistake, it shipped a new product, Library to several hundred.

When some asked for the documentation, WordPerfect discovered its error, and politely declined to be that user-friendly.

Early glimpses of the 1.4 system can now be obtained via a Commodore system-in-testing, Jumpstart 1.4. The current version is being made available in selected areas to developers willing to buy the chip set and participate in testing.

DATEL ELECTRONICS





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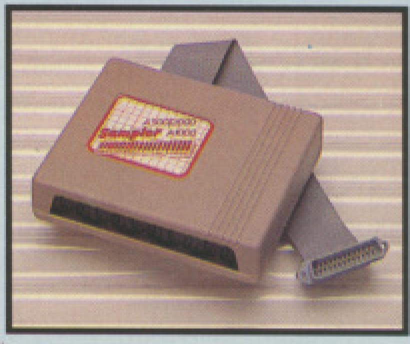
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To complement the Sample Studio the Datel Jammer gives you a 5 octave keyboard to play & record your sampled sounds.

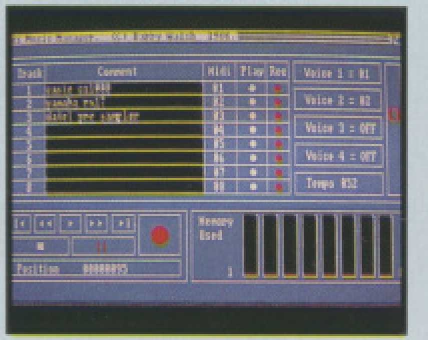
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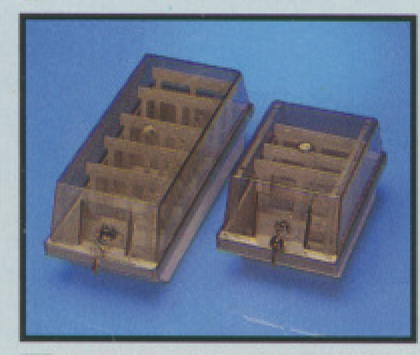
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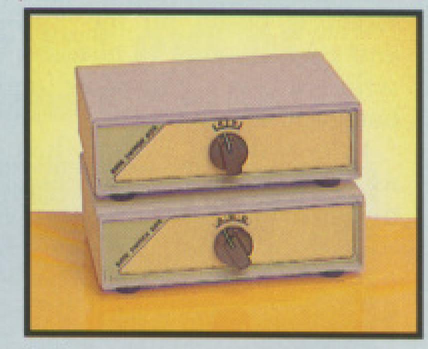
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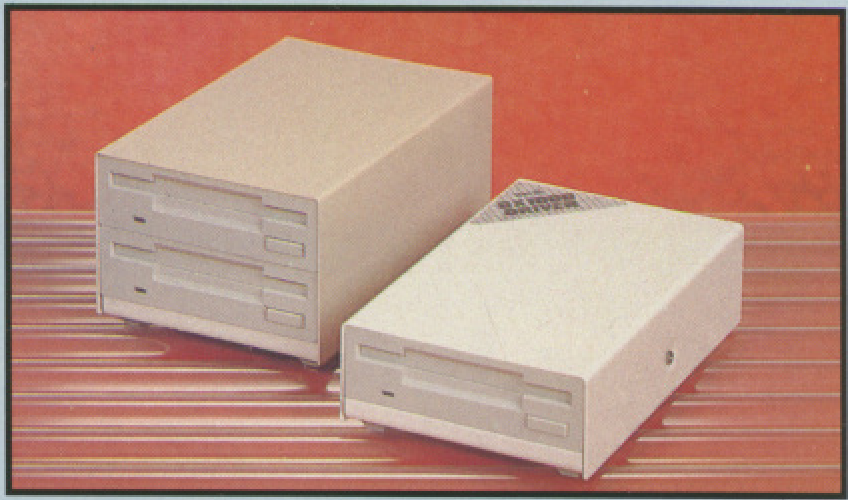
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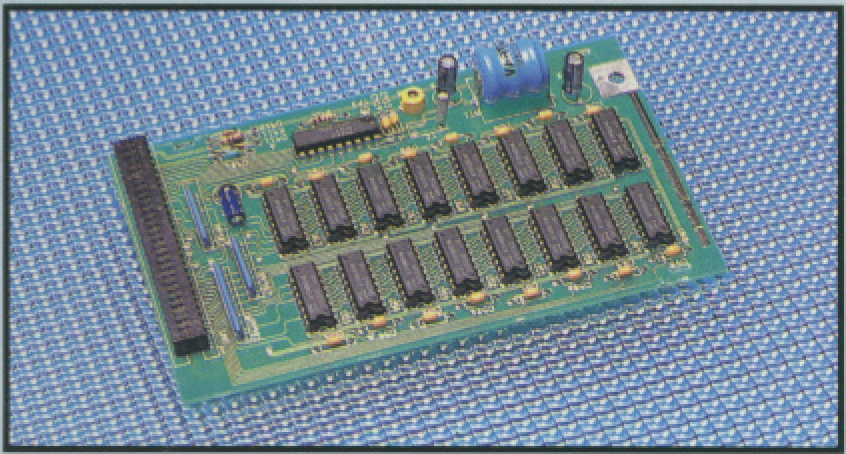
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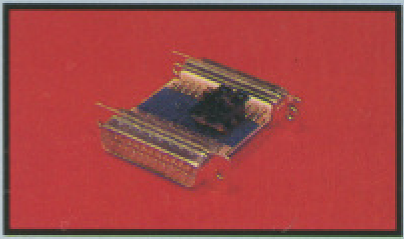
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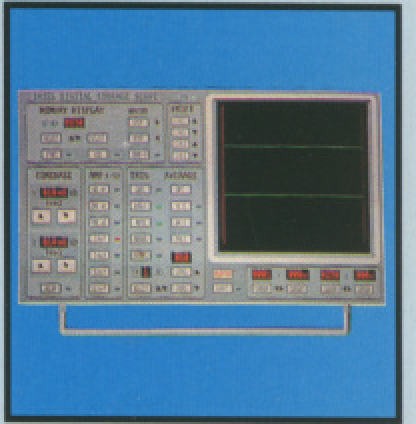
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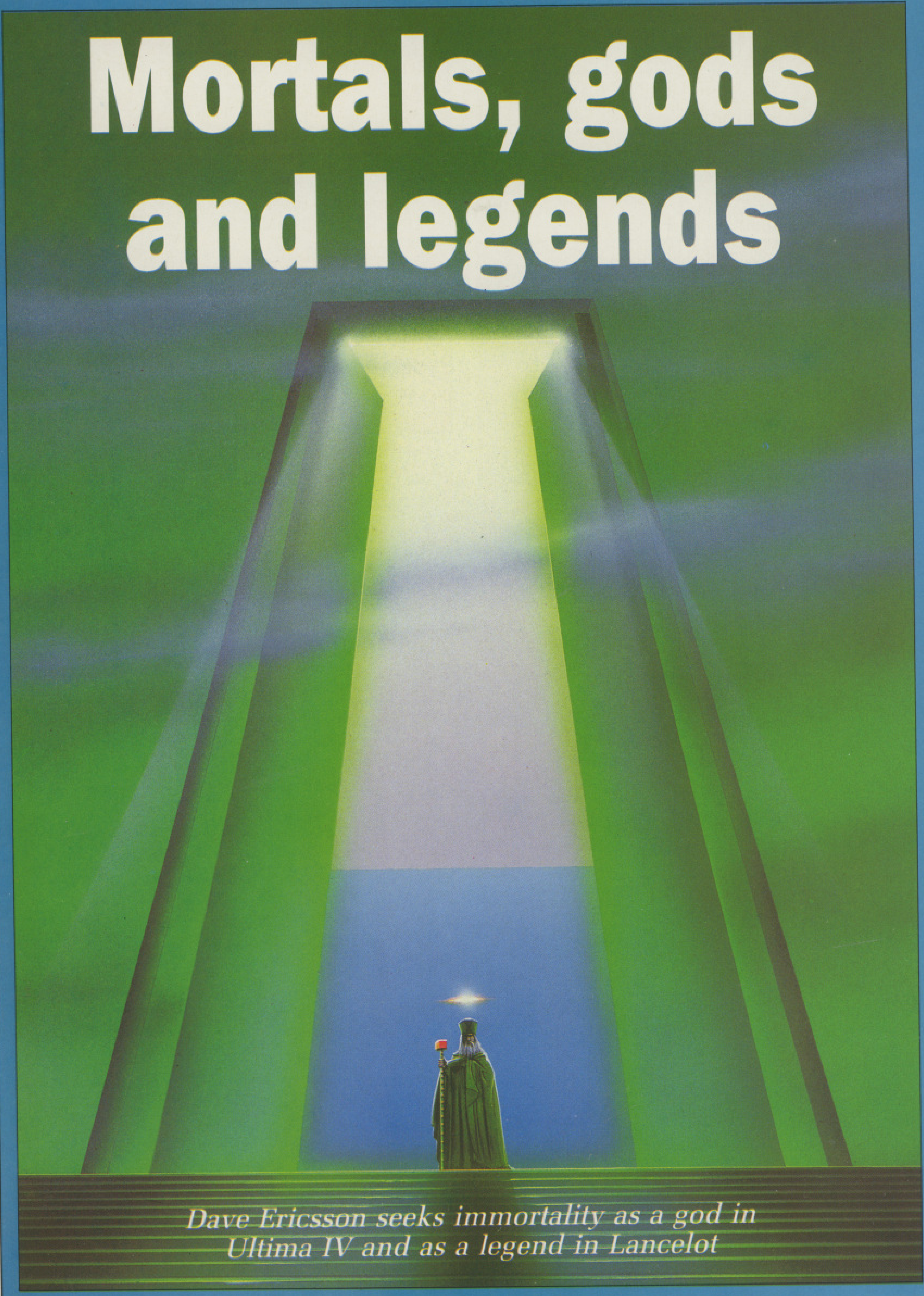
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Mortals, gods and legends



Dave Ericsson seeks immortality as a god in Ultima IV and as a legend in Lancelot

YOU are walking in the country. The world has been treating you badly, but the peace and quiet under a clear blue sky clears your mind and gives you a real sense of wellbeing. A pillar of blue light appears before you. Lasting for seconds only, it disappears, leaving behind an amulet and two books wrapped in thick cloth.

The amulet is an ankh, a cross with a loop at the top. The cloth is an ancient map and one of the books is The History of Britannia by Kyle the Younger. Fascinated, you settle down to read about the realm of Britannia.

Finished reading, you become aware of music, and following its haunting melody find what appears to be a Renaissance Fair. The music leads you to a gypsy caravan set apart from the rest. An old gypsy, also wearing an ankh, welcomes you and asks you a number of questions. Each has two answers and you reach deep into your heart to give an honest response. After the final question the fabric of your universe seems to wrench, split and meld back together...

You open your eyes and find yourself somewhere in Britannia. Life now has a new meaning, Ultima IV – Quest of the Avatar has begun.

This role playing adventure is vast in its scope. There are plenty of monsters to fight but there are also the underlying quests to solve. In each of the castles, towns and villages of Britannia you must talk to the people and thread together the information they give you. There are more than 200 people or creatures to interrogate. Many will have something useful to tell you and seven are willing to join you.

YOUR ability to reach a solution and destroy the evil force found in the Abyss depends on a number of things, some material, others spiritual. You must first become an Avatar – from the Sanskrit, it literally means a god come down to earth in bodily form.

You must show by your actions and deeds that you are worthy in eight attributes – compassion, honesty, honour, humility, justice, sacrifice, spirituality and valour. You then visit the eight shrines, carrying the correct rune and meditate, intoning the correct mantra, to attain Avatarhood.



About to be questioned by the Gipsy

You will need some help to stay alive long enough to reach this first goal. Each of the main towns of Britannia is the home of a specific class – paladin, fighter, ranger, druid, tinker, bard, mage and shepherd. The questions you answered for the old gypsy will have determined your class, and you will arrive in Britannia near the appropriate town. One person will join you in each of the other towns. However, some may not join straight away if they think you are not yet worthy of their friendship.

Most evil creatures carry gold. If you fight them and win, they will leave behind a chest which you must open to get the gold. Many carry traps – beware of acid, bombs and poison. Gold is necessary to buy food, weapons, armour, the ingredients to prepare magical spells and a few special items from the Guild. In your spell book you will find how to prepare many of the simpler spells. The more powerful will need research, and the gathering of two ingredients not on sale at any shop.

TALKING to people is simple, there are three main questions that may be posed to all you meet – their name, job and health. The replies may encourage you to pursue an additional subject. For example, a young mage met in an out of the way village may say "I seek the wisdom of magic". If you throw "magic" back at him he will tell you who and where his master is, and that he knows the "gate" spell. When you meet his master you can ask him about this spell.

Some lines of enquiry will lead you to many different places scattered around Britannia. Persevere and make careful notes of who you meet where, and what they have to tell you. As ▶

REPORT CARD

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Origin/MicroProse
£24.95

STORY LINE..........
Goes way beyond just monster bashing.

AURA....................
Fantasy world you can live and die in.

STAYING POWER.
So much to find will take weeks to scratch the surface.

GAMEPLAY..........
Mouse and single key input work well, some manoeuvres/battles a little slow.

VALUE.................
Must work out at a fraction of a penny per hour.

DIFFICULTY.........
Keep careful notes of conversations.

OVERALL *84%*
A true classic of the genre.



All software is designed especially for the Amiga computer.


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One of the Gypsy's questions

you gain information you will learn that becoming an Avatar is not all that is required of you.

There are a number of objects to find and some lie in the dungeons deep below the surface. Needless to say the creatures found on these trips are powerful. Make sure you have prepared plenty of spells before you enter the deepest levels.

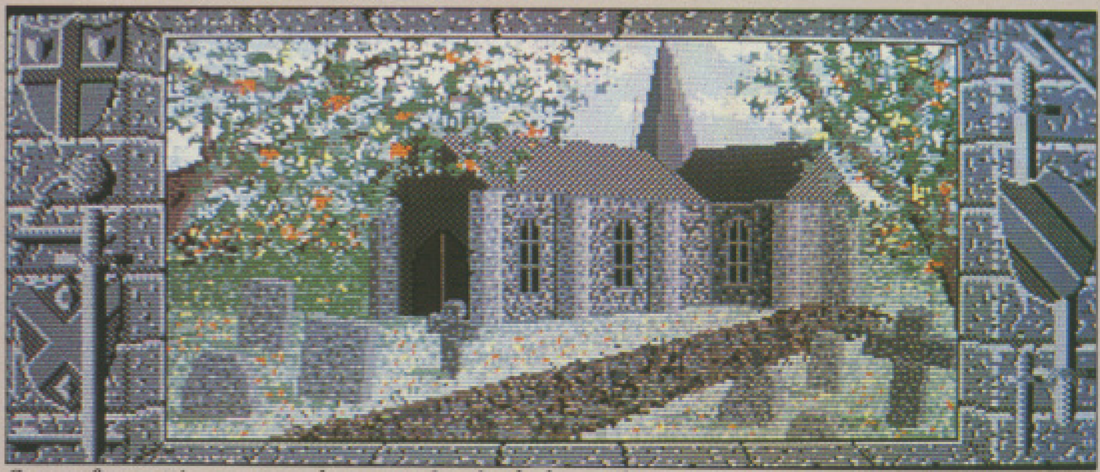
ULTIMA IV is great to play and will take you a long time to solve. The graphics are similar to those of Ultima III – simple and explicit. Normal travel out in the open or in a town is shown as a plan view with your party represented by a single figure.

Enter battle and a larger scale plan view is displayed showing the position of each of your party members. You may then manoeuvre them in turn to place them in the most effective position.

There is a reasonable choice of weapons, but in the early stages I found the missile weapons, sling, bow or crossbow to be most effective. Let the monsters get too close and they will damage you. This may mean either the use of a heal spell or a visit to the healers.

Visit the castle of Lord British often. If your experience has increased enough, he will raise your level, giving you greater hit points and increasing your basic attributes, such as strength and dexterity.

He will also heal your wounds, but beware of *not* going to the healers. They will ask you for a gift of blood to help others, and agreeing to this will help your elevation to Avatarhood. Also in this castle is Hawkwind the Seer, who will instruct you on obtaining perfection in the eight virtues of the Avatar.



Soon after setting out on the quest for the holy grail

Being attacked by a pirate ship can be a blessing. Having beaten them, you end up a ship to the good. You may now sail the high seas and explore further still. The cannon on board is quite powerful, but beware of other pirate ships' armanment. Boarding and engaging in hand-to-hand combat is a safer option.

Dungeons are 3D corridors divided into relatively small sections where it is not too easy to get lost. The dungeons are separated by battle sections that contain creatures and puzzles which must be overcome before passing through.

It is possible to walk your party out of an available exit without giving battle, but presumably the program will record your lack of valour. Likewise, ignoring a needy beggar in one of the towns decreases your compassion and I'm sure Hawkwind the Seer will have something to say if you follow this path. Be warned, there are hints that your companions may leave you if you do not measure up to their high ideals.

Ultima IV is a feast for the role playing adventurer. The only minor criticisms I can make are of the lack of noticeably increasing difficulty in the battles as you progress and the sometimes laborious sequential movement of eight characters in connected battle sections.

It is a must for all followers of the active role playing adventure.

LANCELOT is the latest adventure from Mandarin Software and sadly it signals the end of the company's short but useful collaboration with top adventure writers, Level 9. The game is based on the historical and legendary accounts surrounding King Arthur and his Knights of the Round Table.

Apart from King Arthur, the best recognised name linked with that era is Lancelot. It is as this shining example of knighthood that you will adventure through mediaeval Britain.

The adventure is loosely divided into three parts. The first concerns the arrival of Lancelot at Camelot and the court of King Arthur and his elevation to knighthood. This achieved, the second section involves his exploits to prove himself worthy of his knighthood by rescuing a number of wrongly imprisoned knights. These in turn return to Camelot to swell the ranks of the Order of the Round Table.

The third part follows on some 20 years later where your goal is to help Lancelot in his attempt to find the Holy Grail. The third part may be

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◀ played independently of the first two.

As with all adventures from Level 9, the descriptive text is full and highly atmospheric. The command interpreter is an improved version of what was already a very acceptable system used in its previous games, Knight Orc and Gnome Ranger. The high quality graphics complement the flavour of the text.

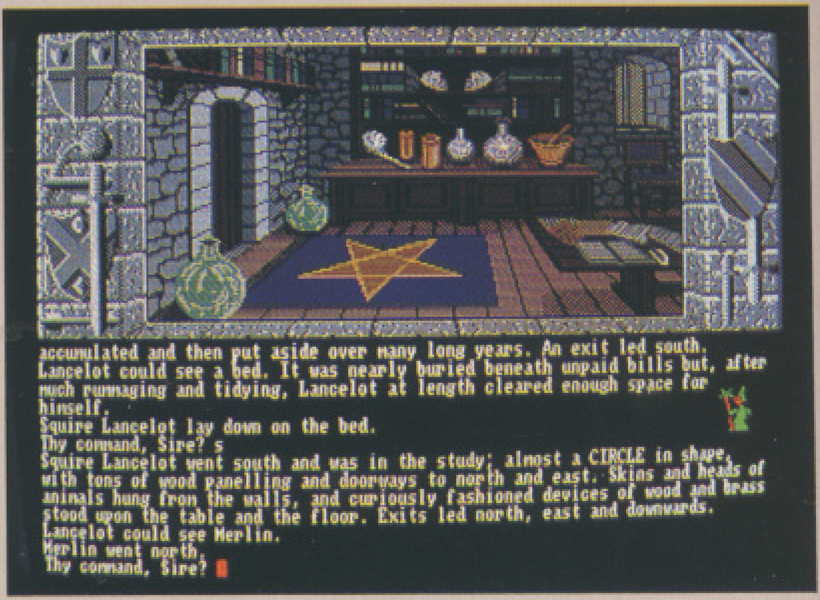
CHARACTER interaction is a vital part of the game. Cooperation between Lancelot and others who are with him is necessary on a number of occasions.

Level 9's command Wait X means that characters can be instructed to perform an act at a particular time. For example, if a rock is too heavy for one man to move, it is pointless to tell others to move it without coordinating their push with yours. Gawain, wait 2, push rock. Ector, wait, push rock. and finally push rock; would ensure that all three of you would be pushing the rock at the same time.

A small scale map showing the major places you will need to visit in parts one and two of the adventure is supplied with the game. The command goto xxxx (or run to xxxx) will take you to that area. You should still draw your own maps to ensure that you explore all possible locations.

Remember throughout that Lancelot has always been depicted as the perfect knight. This was the time when chivalry grew of age and was the watchword of the Knights of the Round Table. To succeed in either part of the adventure, manners, honesty, mercy and honour must be interpreted correctly. His relationship with Queen Guinevere proving to be an exception. There is no room in this game for today's lager lout.

At the beginning, when Squire Lancelot first visits Camelot, he is unable to see the king straight away. He must wander around the town and find somewhere to rest for the night. While here visit Merlin. Although he has no major role in the adventure, his books are worth reading. On the following day be certain to end up at the court of King Arthur.



Decisons on the way to visit the holy hermit Nacien

HAVING felt the touch of Arthur's sword upon your shoulder, remain in his presence until dismissed. You will now have a clue as to where you should go next. A number of quests have to be completed and several hints will be supplied to send you in the right direction. The completion of individual quests is not easy.

It is possible to perform some quests out of sequence, but only when you have tackled all of them will the program automatically lead into part three – The Quest for the Holy Grail.

This final section introduces Lancelot's son Galahad. It is only with his help that the quest may be accomplished. Again cooperation between Lancelot and others is vital to success.

The instructions are clear and explicit with a number of hints to novice adventurers. There is also a very readable section giving a résumé of the Arthurian saga.

Lancelot is one of Level 9's finest adventures. It is not easy but for those that falter, an excellent hint sheet is available. Used sensibly this will enhance the enjoyment and elation at solving the many puzzles.

REPORT CARD

LANCELOT
Level 9/Mandarin
£19.95

STORY LINE..........
Excellent text, believable quests.

AURA....................
Just what legends are made of.

STAYING POWER.
Plenty of devious puzzles to solve.

GAMEPLAY...........
Well planned system to utilise character interaction.

VALUE..................
Plenty to see and do in olde Britain.

DIFFICULTY..........
Not easy but the clues are there.

OVERALL 89%

Very good mixture of plot and puzzles.



On the way to rescue Tristrown and Tintagel

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The Amiga can already emulate an IBM PC and a Commodore 64. Simon Rockman looks at a package which will add the BBC Micro to its repertoire of impersonations

SCHOOL. A place where life is determined by bells, torture is timetabled as double French and Fatty Wilkins never does games. It is also a place which has a load of Acorn-designed BBC computers.

They are there because the school bought them at half price under a government scheme, and given the choice between a super fast machine

The Amiga that thinks it

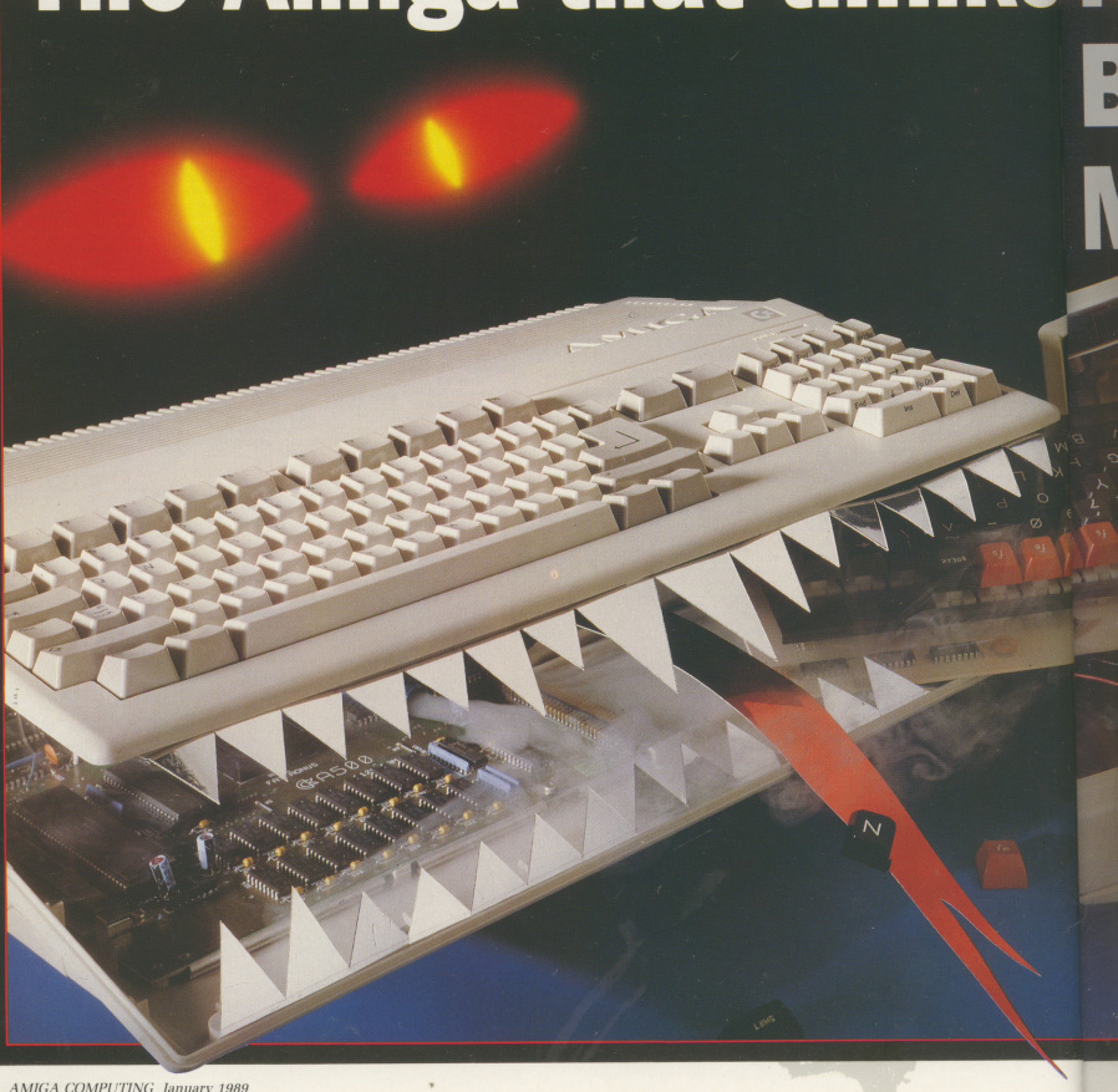


Photo: Martyn Howett

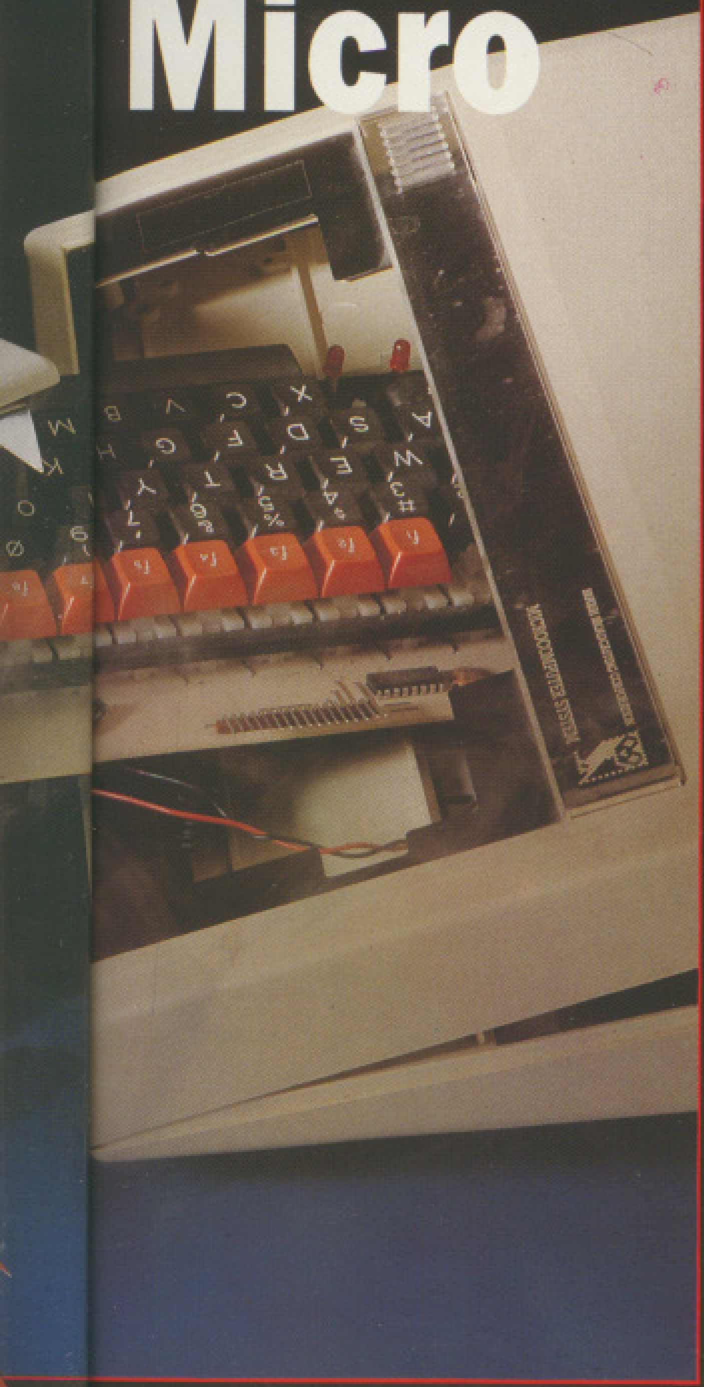
with an excellent Basic and a 3k Vic 20 I think the school made the right move.

The usual rule is that a computer only succeeds if there is software written for it, and software only gets written if the computer is successful. This loop is what has kept the IBM PC going when there are many better machines around. The usual solution is for the computer manufacturer to put a lot of effort into getting software written.

Acorn struck lucky, the machine sold without software. Brilliantly designed, it was the computer buff's dream. The BBC took 10 per cent of profits and based a computer literacy programme around the beige box; the computers in schools scheme meant doting parents bought the machine little Nigel had at school for him to use at home.

So the BBC Micro reversed the loop and became a success before the software was written. Keen to capitalise on this, lots of small companies produced software for it, and thanks to the educational foothold the BBC ended up as the only machine with a respectable quantity of educational programs worth a second look.

s it's a BBC Micro



Acorn sold 600,000 BBC Micro. About half of them are in schools. These institutions would love to upgrade, but know that to do so would mean waving goodbye to the best base of educational programs they are ever likely to see.

Commodore would love to sell Amigas to schools, partly to improve the sales of the Amiga 2000 but also to get the Nigels of the future to ask for an Amiga at Christmas.

Now if the Amiga could run all the educational software that Mrs Martin, the computer studies teacher keeps under lock and key, she might wake up to the joys of Commodore computing. While Nigel is blasé about a ray-traced five bitplane blitter-object unleashing megabytes of digital death on the kreeblies, nothing impresses Mrs Martin more than a four colour snowman which can count three green balloons.

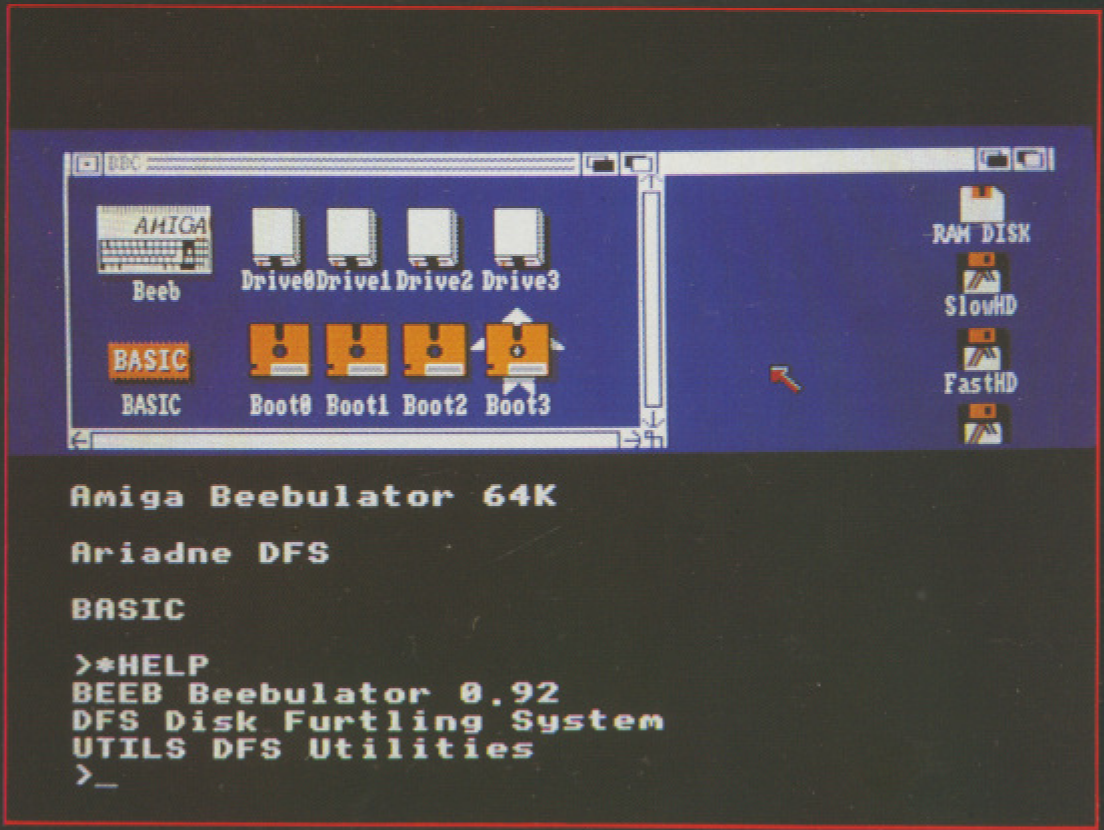
To turn the Amiga into a machine which will meet Mrs Martin's exacting standards, Commodore commissioned a BBC emulator from Ariadne Software. Emulators are difficult beasts. Anyone who has some experience of Transformer (the Amiga PC emulator) or the Readysoft C64 emulator will know that such software is of limited use.

Ariadne was chosen by Commodore to produce a genuinely useful program which could run the majority of BBC Micro programs used in schools, including a hit list of 12 major ones compiled by the Department of Trade and Industry.

The result is the Beebulator. This is an Amiga program which makes the Amiga function like a BBC B. It does more than turn the Amiga into a BBC Micro, and is far more advanced than just an implementation of BBC Basic for the 68000.

Beebulator emulates the Acorn operating system (OS) which means

▶



Click on the Icon to turn your Amiga into a BBC Micro

that all programs which use proper system calls – "legal programs" – can be run on the Amiga. Unfortunately many graphics programs use the "illegal" technique of direct screen access. The software, provisionally priced at £49.95, comes with a slim manual and a disc of programs.

The main file is Beebos. It is represented as an icon by a BBC computer. Click on it and the Beeb turns into an Amiga. This, along with DFS – Ariadne's Disc Furtling System – represents 300k of assembler and machine code which forms a software "bridge" from the BBC operating system to the Amiga environment.

Basic is held as a separate file, it is only 20k long but is tight and very efficient machine code. It is something of which Ariadne is justifiably proud. BBC Basic is as compatible as possible with BBC Basic 2, but runs up to seven times faster. The splitting of the language and the operating system means that Ariadne could produce further languages for the emulator or they could create an Amiga version of BBC Basic.

Because many BBC programs mix Basic and machine code, there is an emulation of the 6502 chip. Using software to emulate a fast processor is pretty inefficient and so this part of the emulator can run up to 10 times slower than a real BBC Micro.

To reduce this problem, all the operating system routines have been written in 68000, so even a machine code program which uses the OS extensively will run faster on an Amiga.

Graphics modes

The Beebulator supports the following graphics modes:

0	640 x 256	2 colours	80x32
1	320 x 256	4 colours	40x32
2	320 x 256	16 colours	20x32
3	text only	2 colours	80x25
4	320 x 256	2 colours	40x32
5	320 x 256	4 colours	20x32
6	text only	2 colours	40x25
7	Teletext display		40x25

While 6502 can be mixed with Basic in-line – where mnemonics are typed straight into Basic – 68000 routines can be called as extensions, so it is very easy to tweak programs which need a speed boost.

It is possible to run the system without Basic. This drops you into a simple machine code monitor which will accept AmigaDos CLI commands, dump or alter memory or registers and disassemble and run 6502 programs.

Some things the Amiga can't cope with. The BBC has an analogue joystick port. The command ADVAL is used to read this, and since the Amiga uses digital joysticks Beebulator ADVAL is fixed to always return zero. The Amiga keyboard is different and so some substitutions have been made.

The f10 function key mirrors the BBC f0, DEL is used as a copy key for the BBC's interesting screen editor and left Amiga-help performs a break – which resets the machine. Help on its own could have been used, but was considered too likely to be pressed by mistake.

Bits of the operating system which are duplicated by Amiga preferences are not implemented. Things like the key repeat speed are set from Amiga Workbench. Disc formatting is done from AmigaDos, and the BBC Micro command *COMPACT which tidies up a fragmented floppy produces the error message *Thou kiddest*.

The Amiga has been made to feel like a BBC by emulating the graphics modes (see table), although the character set looks very similar, it is actually closer to the original teletext design than the Acorn version.

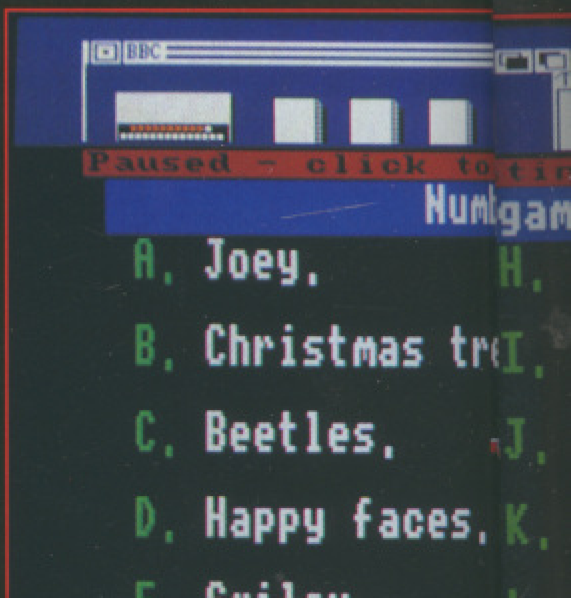
The Beebulator powers up in Mode 6, a text only, two colour mode because this is the fastest at writing to the screen. On a real BBC Mode 7, the teletext mode – eight colour with limited graphics – is very much faster because it has hardware support.

While Ariadne's Mode 7 is useable it is not recommended for editing – the manual describes it as being like a very skilled painter trying to produce text as fast as a crummy typewriter.

The speed of Beebulator graphics is



Graphics are very fast



Teletext mode is supported

most impressive. Amiga libraries and the blitter are used to full effect, which makes some demonstration programs run unbelievably fast.

Text output is very quick, and this is the only place where the Beebulator bends some of Commodore's rules for programming the Amiga. The result is that listings scroll by nearly as fast as they do on a BBC Micro which cheats with hardware support. However even Workbench 1.3 libraries do not support ANDing and XORing graphics so the BBC's GCOL modes 1 to 4 are not implemented. Commodore claims that experience with the programs used in school has shown this not to matter, but BBC Educationalists we spoke to expressed doubts as to how many graphics programs will actually work.

THE job Beebulator was designed to do was to allow schools to run their existing programs – often home grown – on the Amiga. For this reason some strange commands have been included. Cassette motor control is accepted – although it doesn't do anything – to stop the system crashing. The disc filing system works in the same way as Acorn's DFS, with an advanced disc filing system being written by a separate programmer.

Commodore assumes that anyone who wants to use Beebulator will also have a BBC Micro, so the approved way to get programs from a BBC to an Amiga is through a three wire cable from the Amiga's RS232 to the BBC's RS423. Typing *CONNECT on the Amiga and *FX 2,1 on the BBC gives the Amiga control of the latter.

Whole BBC discs can be copied to Amiga discs by using a *IMPORT command, while individual files can be copied using *ICOPY.

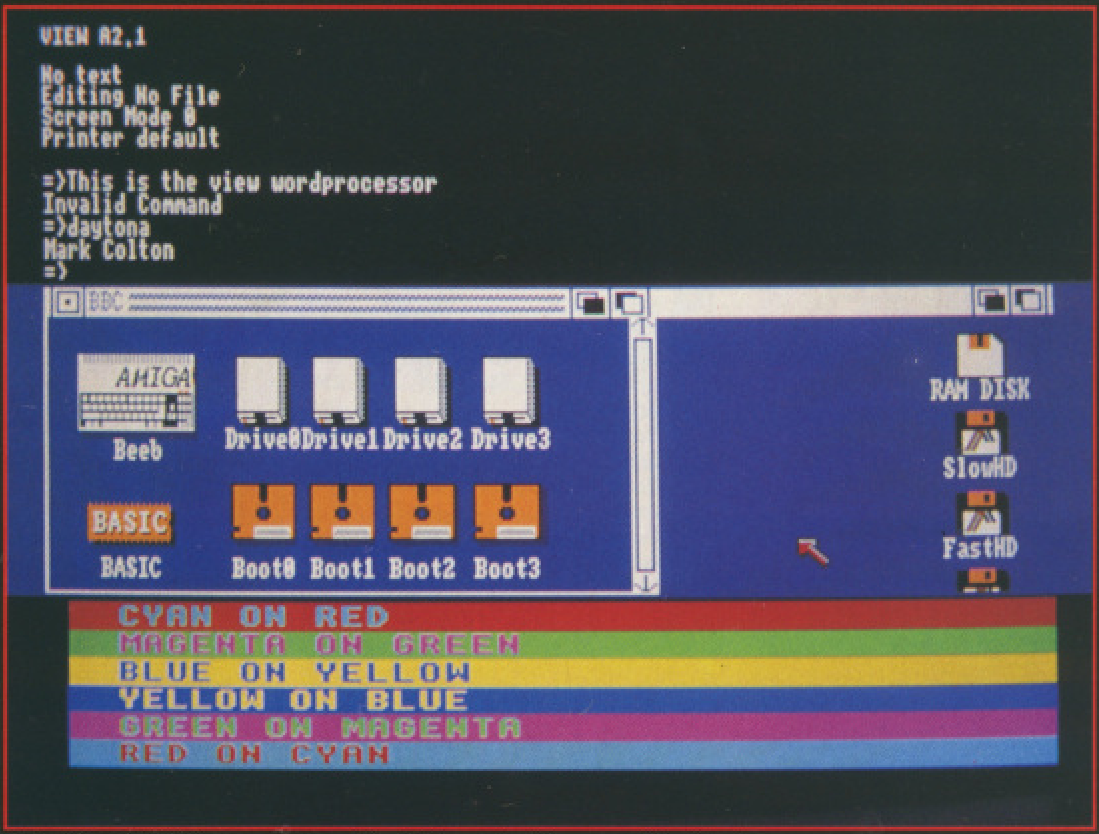
The syntax is a strange hybrid of Amiga CLI and BBC OS. The command *ASSIGN 0 RAM: allows the Beebulator to save files to the Amiga ram drive as though it was a BBC floppy. A *ASPOOL command makes transferring information from the BBC side to the Amiga side very simple – ideal for a user who has a lot of data on BBC discs and wants to get the information onto the Amiga.

BUT Beebulator is really at its best when you realise that it is an Amiga program. It will multi-task, although you will need a 1Mb machine to get more than one emulator running at a time.

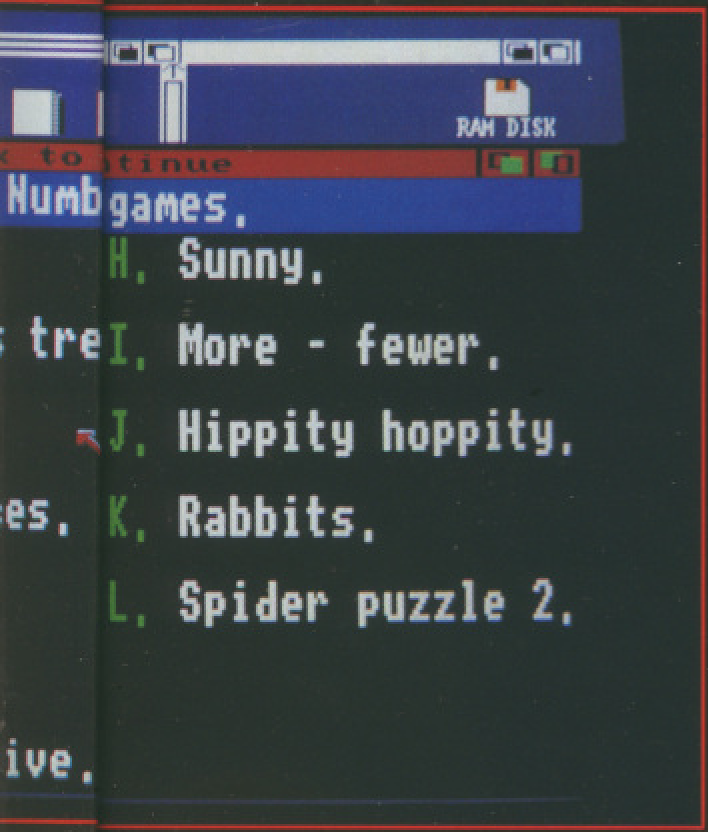
It is hoped that schools which buy Amigas as BBC replacements will start to use the real power of the machine. They will have to learn some things about Workbench and CLI. If BBC Basic for the Amiga does appear it will be a useful next stepping stone.

Any ex-BBC owner who gets to grips with Beebulator will love the system. It is great to see existing programs whizzing along on an Amiga, typically two to four but possibly seven times faster than on the machine for which it was intended.

It is just the excuse Mrs Martin and Nigel were looking for.



Any "legal" BBC programs – like View – will run on the Amiga



REPORT CARD

BBC Emulator
Commodore
£49.99
£39.99 to schools

USEFULNESS ......
Provides a good and powerful Basic and a way to run a large base of existing educational software.

EASE OF USE ....
Click the icon and you have a BBC Micro. You will need a book on the Acorn machine if you don't own one.

INTUITION ....
The BBC machine operating system obviously doesn't obey Commodore guidelines, but the emulator will multi-task properly.

SPEED ....
Up to seven times faster than a BBC Micro, which was one of the fastest 8 bit micros. Rapid text print.

VALUE ....
A well written and interesting program which does a good job of emulating a BBC Micro.

OVERALL *84%*

Won't run games or any programs which break Acorn rules. Slow at machine code but magnificent for running educational software.

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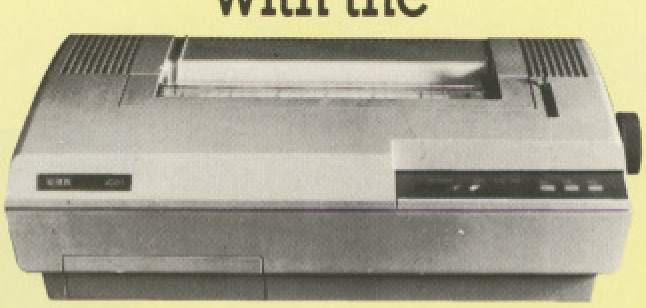
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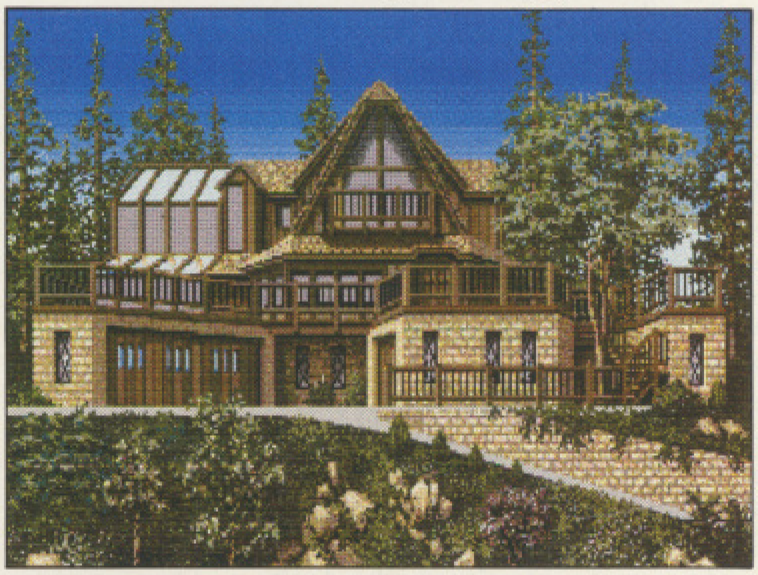


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Wizard

Graham Wayne, professional musician and former manager at Rainbird Software, looks at Midi magic

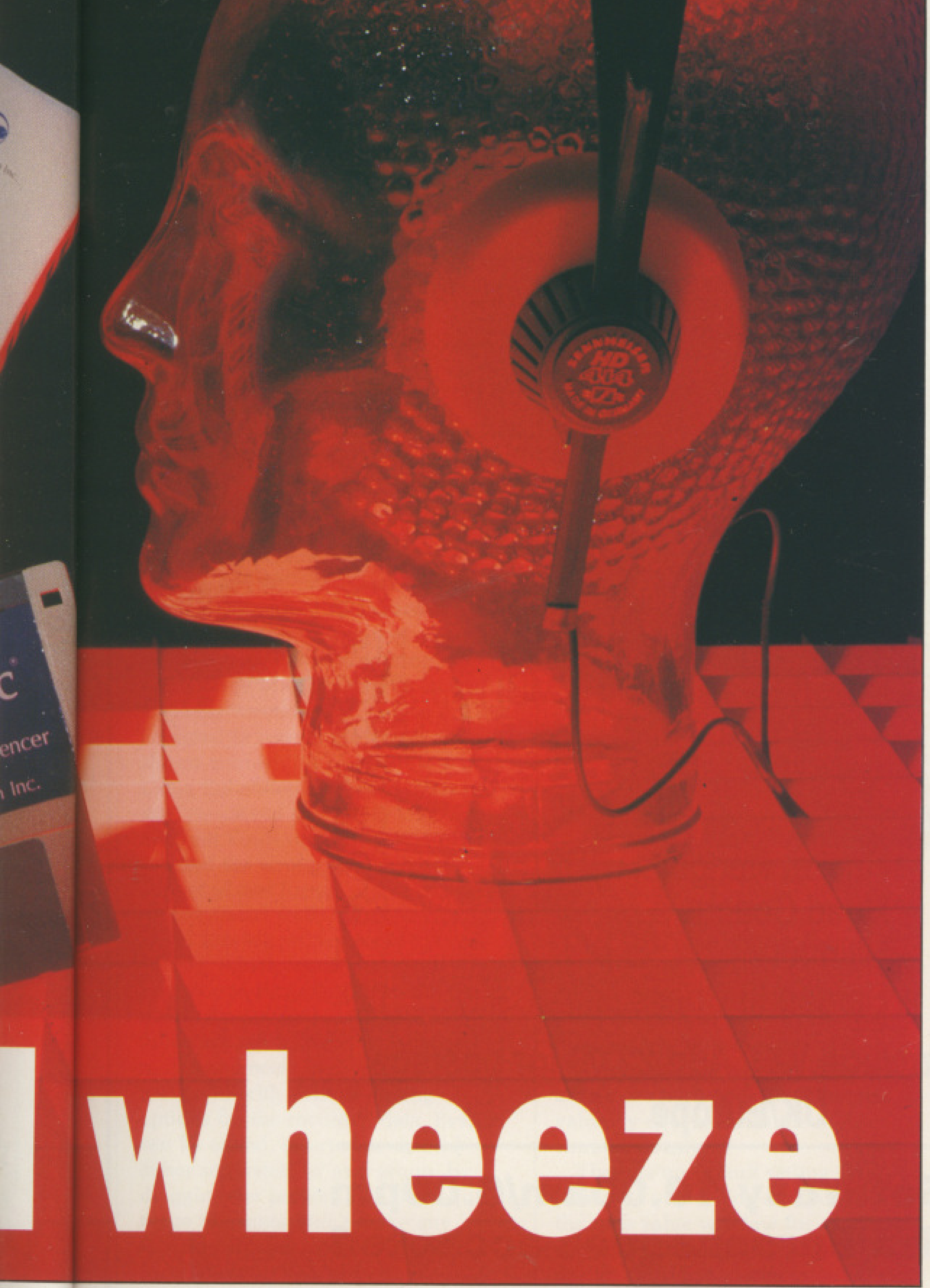


SEQUENCERS are the tricky end of Midi programming design and implementation. Timecode, Midi clock rates, song pointers, sync to tape, loops and sequencers are more complicated. The more you pay the more you get. So unless you are considering buying a top end of the market sequencer the only way you can evaluate the available software is by the kilo, as it were. In other words, what doesn't it do, and how important are the omissions, anyway? Midi Magic is a 16 track system written by the American team Circle Design. It sells for $130 in the US, so we can reasonably expect it to cost about £80 in the UK, putting it in the middle band of prices for this kind of software. It should, I believe, offer a substantial range of facilities to the semi-pro and professional who don't require the most advanced types of data handling and control, since £80 puts it out of the fooling for fun budget and into the let's get serious area.

At least, I get serious for £80; don't know about you.

The front end of Midi Magic is well thought out. If you've already had experience with a sequencer system it is quite possible to find your way around the window system without reference to the manual.

Commendably, all the buttons work more or less as you would expect. Some exceptions are necessitated by



wheeze

the Wimp environment. Things such as clicking on a numeric value and holding down the mouse button down while moving the mouse left or right to increment and decrement the number.

On start-up, the inappropriately named Tape Transport, Track Display and Don't Panic windows are opened. This last option halts the sequencer in mid-stride and sends note-off commands on every channel. A bar meter on the right side of the screen gives a visual and percentage display of the available memory, and above it the play-through buttons control the output and rechannelling of Midi information.

AT the top of the screen pull-down menus reveal Project, which we'll come back to, Controls, which deals with clocks, tempos and Midi control messages, Song, through which the architecture of sequences is built and manipulated, Sequence, which contains similar options to the Song menu but for the individual component parts of the song, and finally Track, which is where the editing of track data, quantising and track copying may be selected.

The pull-down menus are nested. This appears to be a sensible method of grouping available options, but in practice the computer has to draw and then erase every sub-menu as you drag the pointer down the menu to select your choice, and the speed of selection is irritatingly tardy.

Many of the menu choices open other windows through which new information or instructions can be entered, and all windows can be placed and sized according to user requirements. There is also a startup file accessible via the workbench through which the user can set startup preferences.

Recording with Midi Magic is straightforward. Select a track, or tracks for recording in the Track Display window – Midi Magic allows

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multiple track recording on different MIDI channels, a feature not found on many sequencers of this price – by clicking on the record select button for the track, which blinks red, just like a 24 track in record ready mode.

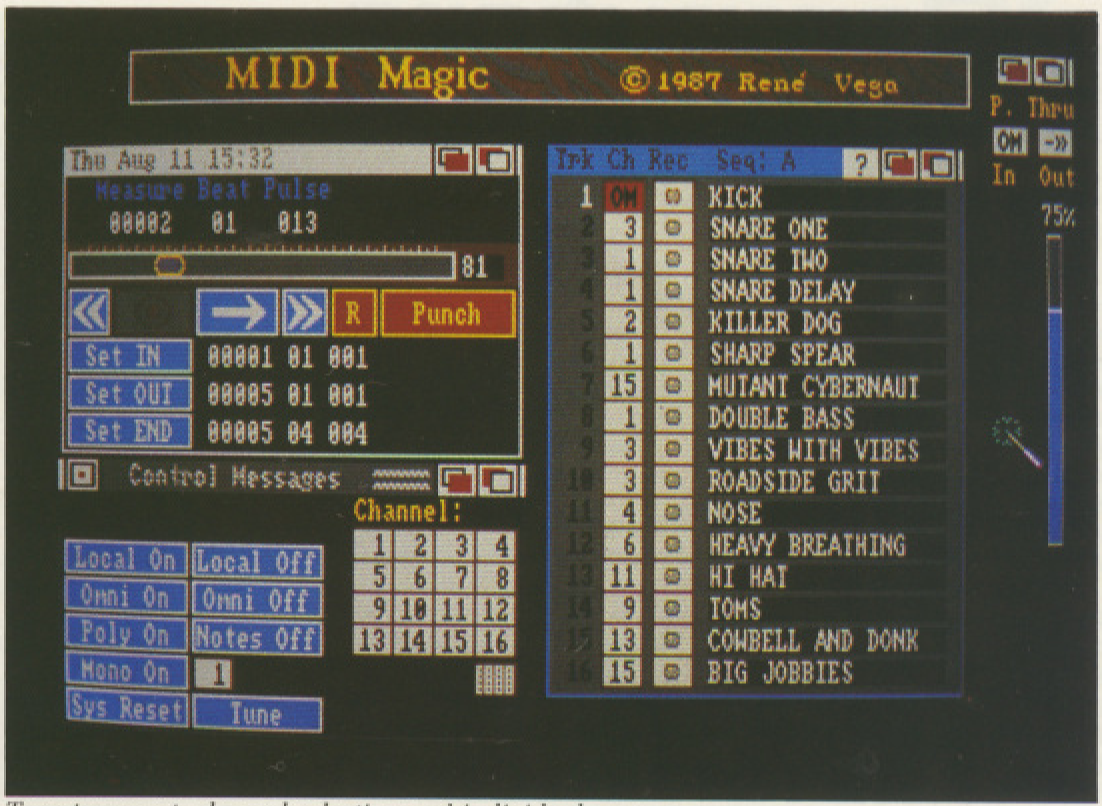
When you are ready to record, you come across a nice touch which my much more expensive sequencer could do with; instead of galloping off recording a load of nothing while I prepare myself for another performance, Midi Magic will wait until the first note is played before it uses any memory, although the metronome is running all the time.

The program will assume that the first note, if played just before beat one (when I jump the gun, usually) should actually be *on* beat one (where its maker intended it to be). Some sequencers simply won't acknowledge anything that occurs in the countdown period, cutting off the first chord or beat.

RECORDED tracks can be manipulated with the mouse – here the thought that has gone into the user-interface shows. Operations such as trimming a track or setting in and out points for further work such as drop-in recording can be done quickly and efficiently, often without leaving the main display area.

It is also at this point that one comes across the most glaring omission in Midi Magic, the lack of an Undo function. Early on in my test I wanted to correct the timing of some sloppy rubbish I'd played into a track. Using the quantise menu, which is well conceived and offers four different kinds of correction, I blythly selected the wrong note value to correct to and turned my opus into an unintentional waltz. Oops.

But moving on, we come to event editing, which requires a menu selection to that effect from the track menu. Events are represented following the numeric conventions of most sequencers and you are presented with various editing options for the recorded data. Events can be added, inserted or deleted either separately or as a group, by dragging the pointer over the required range of events. Don't make any mistakes though, or you'll have to redo whatever you've undone.



Tape transport, channel selection and individual sequences



Tempo control behind the extensive online help

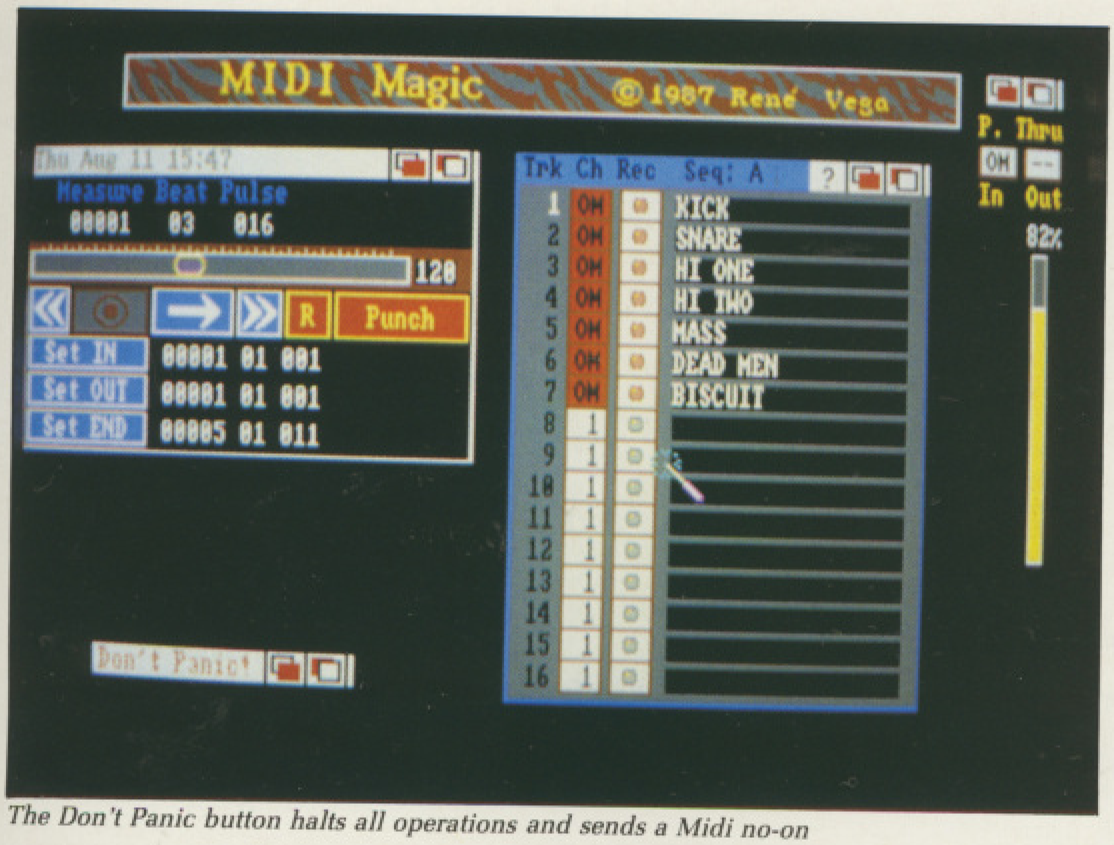
NOTES can also be entered in step-time, but it is here that the design seems, for once, rather clumsy. Even the manual admits that "you may have to be something of a contortionist..." since you must press a note or chord *and* select the note value by clicking with the mouse simultaneously.

There is no default setting for step-time note value. You must click on the note value window for *each* note input. A strange eccentricity in the design stage here, boys.

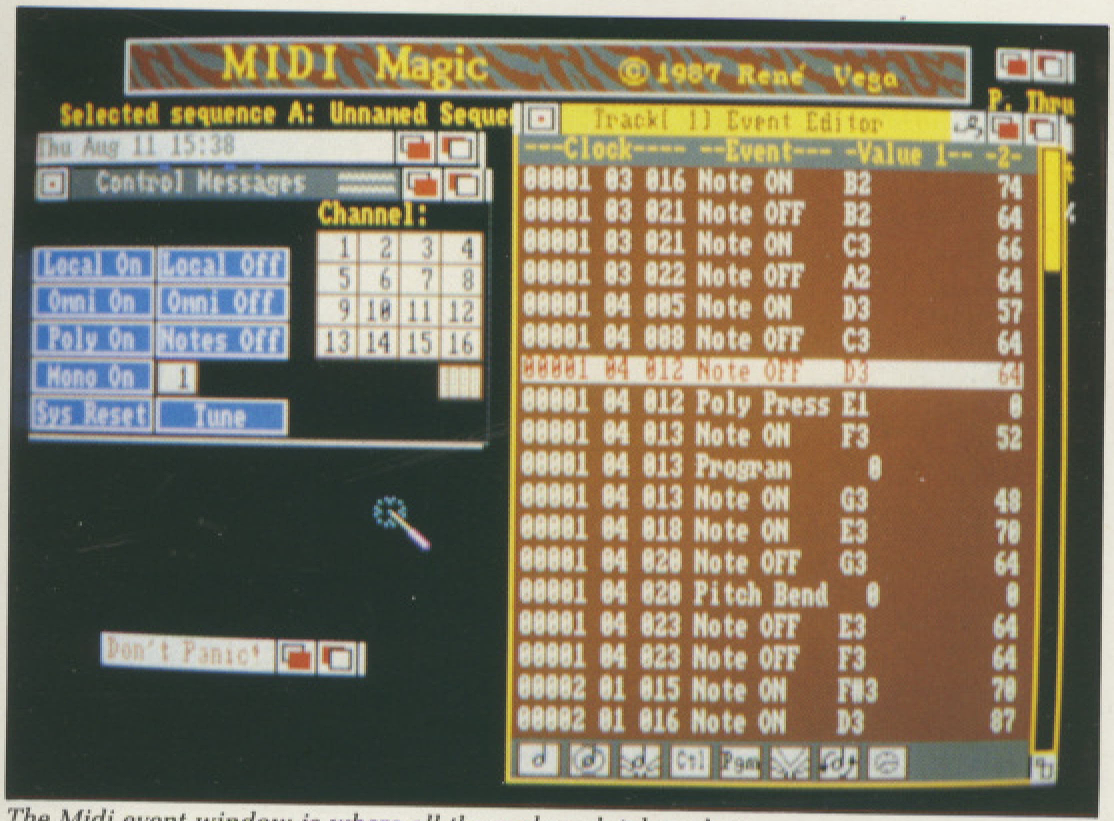
If I was working with tape, the next creative stage would be to cut up all my tracks and join them together in one long line. Midi Magic arranges the construction of multiple tracks in sequences and songs in the fashion of the drum machine.

A song may contain any of 26 sequences – called A to Z – and the sequences may be of any length constrained only by memory. Sequences in turn may contain up to 16 tracks of Midi data of any length,

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The Don't Panic button halts all operations and sends a Midi no-on



The Midi event window is where all the real work takes place

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any of which can loop, transpose and repeat.

SEQUENCES can be appended to each other if 26 parts isn't enough, which it often isn't. Midi Magic affords the user simp le methods of building songs and sequences, and other than typing in the names of tracks and sequences, I can't remember using the keyboard at all, or missing it for that matter. Some mouse-intensive programs are actually rather awkward. Midi Magic works, if you see what I mean.

Any manual that informs me that "Some of you Virgo types may want to clean up the sequence..." or warns me that I "..may be about to have a good time..." wants burning over a charcoal brazier, in my opinion. Luckily, the Project menu contains an extensive Help file available by topic. Listing all the commands and procedures, it is all one needs to make the most of Midi Magic. In all fairness, the manual does list all the Midi commands, op-codes and system messages as well as hard disc installation methods.

The package is fast, powerful and nice to use. It has many refinements lacking on sequencers twice its price and does nearly all the things you would expect, and quite a few you don't. It is multitasking , which is most useful if you want to run editors at the same time. Too bad it doesn't recognise song pointers but it will read Midi timing code from an external source, so some kinds of synchronisation are possible.

THE software is flawed by the lack of a Undo function and the poor step-time operation, but the extensive on-screen information about using the system is a big bonus, making possible the use of those clever little facilities one wouldn't normally get the manual out to look up. A word of warning about memory: Midi Magic takes up a lot of ram, so a memory expansion pack is nearly a compulsory accessory.

REPORT CARD

Midi Magic
Circle Design/Brown Wagh Direct
01-602 2502
Price £79.95

USEFULNESS
Has useful features and sophisticated options that cater for most Midi sequencing demands if the number of tracks are not a concern.

EASE OF USE
Good user interface and extensive Help windows. Quick and simple to operate.

INTUITION
Fully integrated and multitasking.

SPEED
Fast input and screen routines but gets confused sometimes if several things happen at once. Quick with editing.

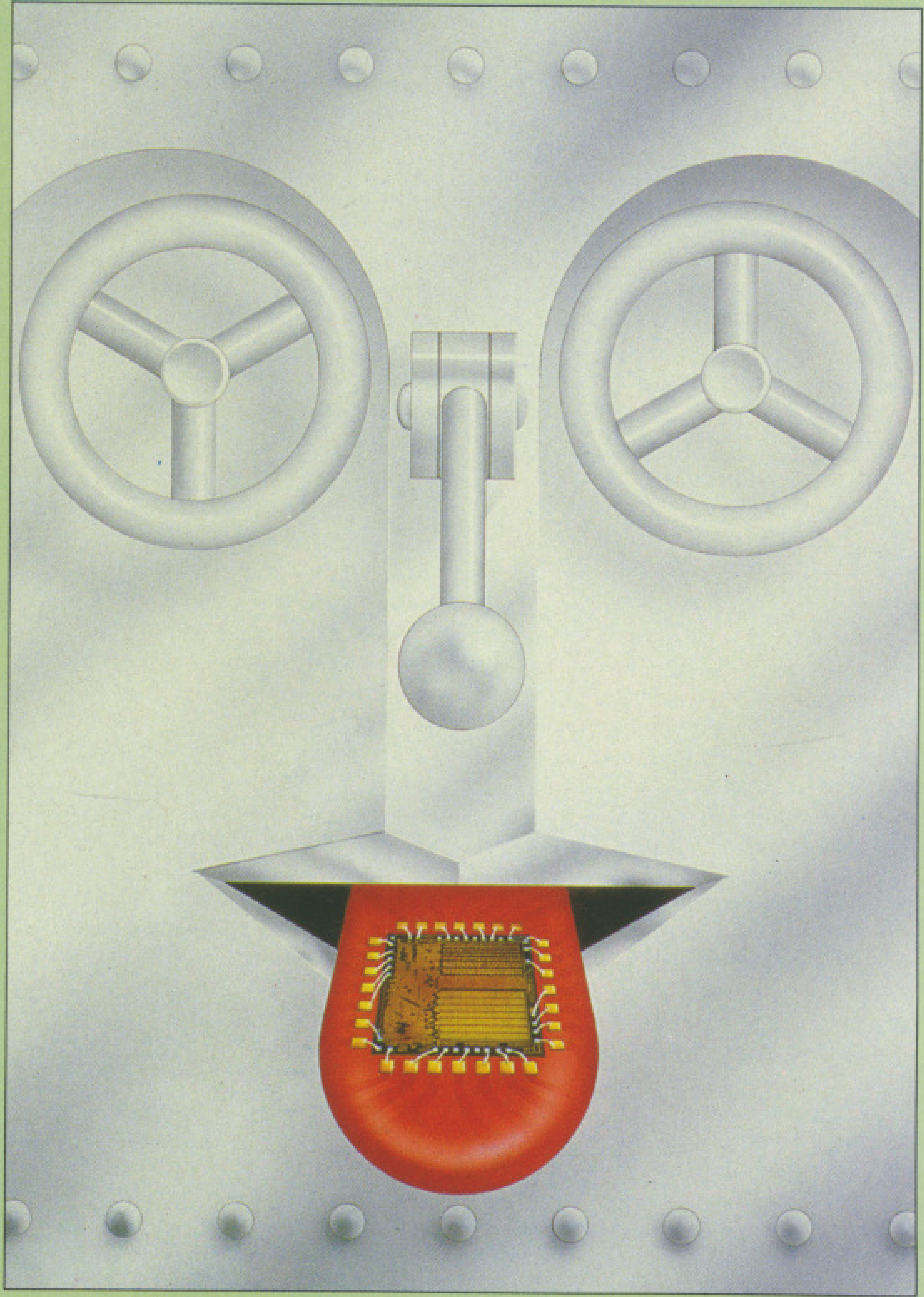
VALUE
With other sequencers coming on to the market every week, this one may not be so well priced in a year, but right now it's a viable choice.

OVERALL *77%*

A good choice for keen amateur or semi-pro.

Speaking Basic

In Part Two of his speech synthesiser series Rex Last tries out an interesting variation on an all-time favourite beginner's program



THERE can be no prizes for guessing what must be the all-time favourite "first Basic program you have ever written". As I recall, it goes something like this (give or take a few REMs and the odd bug, of course):

```
10 PRINT "HELLO WORLD!"
```

Wouldn't it be nice to play a variation on that age-old theme and write a first program that goes like this instead:

```
10 SAY "HELLO WORLD"
```

Well, you can – it's almost but not quite as easy as that. If you load your Extras disc and double click on AmigaBasic, you can see the speech synthesiser at work, and start experimenting with it.

Easiest things first. In the List window, type the following line:

```
SAY TRANSLATE$(_Hello there_)
```

AmigaBasic beginners will see with relief that this is one of a new generation of Basics like Turbo Basic which doesn't require line numbering and which positively encourages structured programming.

Let's consider the Say statement in a little more detail. The speech synthesiser goes through the following stages:

- First, it requires a string. This can either be a literal string or a string variable like fred$, or even bits of strings or concatenated strings.
- Now the string has to be converted into a phonemic representation which the synthesiser can understand, and that's done with the TRANSLATE$() function.
- Finally, you use SAY to make the translated text come out as speech.

If at this point you are muttering to yourself "A phonemic what?", I'm simply referring to the way in which the synthesiser program takes the ▶

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string of characters and carves it up into what it thinks are the right sounds before then going on to utter them.

Try this out with a program like the following:

```
fred$ = "hi there"
PRINT fred$
joe$ = TRANSLATE$(fred$)
SAY joe$
PRINT joe$
```

That breaks down the first demonstration program line into its component parts.

The output should include the line we saw in last month's article:

```
/HAY4 DHEH1R
```

That's the Translate-d phonemic representation of the string "hi there"

One way of experimenting with the Say command is to find out how the synthesiser "speaks" the letters of the alphabet. That can easily be achieved:

```
sam$="abcdefghijklmnopqrstuvwxyz"
FOR i = 1 to 26
SAY TRANSLATE$(MID(sam$,i,1))
NEXT
```

So far, so good. But if you've taken even a cursory look at the way in which the synthesiser operates you'll know that you have quite a lot more control over it than simply throwing strings at it and leaving it to muddle through by itself.

In fact, the command SAY is a lot more complicated and powerful than appears at first sight. There is a mode-array feature which can be added to Say, a string of parameters which alter the default values.

It's a rather neat way of overcoming the problem of a function with a whole succession of variables. If you have to cope with nine parameters, as here, then the error potential is pretty impressive if you have to tag a list of them after the function each time you use it. So the mode-array concept gets round this problem in a neat fashion.

If you have a nine-element array params% to hold the parameters, you simply fill it up with a READ statement from a DATA statement, and then you can play around with the spoken word as much as you like, so long as you don't give Say silly values.

Program first, explanations later:

```
DATA 110,0,150,0,22200,64,10,0,0
REM Input "Changes please: ",a%,b%
FOR i = 0 TO 8:READ params%(i):NEXT
REM params%(a%)=b%
SAY TRANSLATE$("Hi there"),params%
```

Note the comma after the string in brackets, with the mode array params% immediately after it.

Run that, and you'll find that the Amiga speaks in its default mode. Now let's take the gloves off and remove the REMs, which will enable us to tinker with the parameters, which we'll now go through one at a time. To get the full picture of what these variations achieve, I suggest you lengthen the string to be spoken to a reasonable length sentence. Here are the parameters for Say:

Parameter 0 – Pitch

The pitch of a voice is defined as the relatively lowness or height of a sound. This is conditioned by the speed with which the vocal chords vibrate. So a high-pitched voice will be one in which the chords vibrate faster and (you guessed) a low-pitched gruff and manly voice will do the opposite. The default value is 110, which AmigaBasic defines as the normal male speaking voice.

Run the program, and at the prompt, type 0,320, then you'll get the highest pitch. The lowest value allowed is 65. Try typing a value outside this range, your screen will flash orange, and up comes the error message *Illegal function call.* You'll have to click on the OK box before you can continue.

Parameter 1 – Modulation

In other words, whether the voice is inflected or stays on a monotone, and whether syllables are stressed or not (remember, the numbers in the Arpanet strings indicate stress). Have a go at the program with the value 1,1. The value 1 gives you a passable imitation of an Amiga-Dalek, and the intoned value 0 is the default.

Parameter 2 – Rate

This parameter determines the speed at which the words are spoken. The permitted range is between the languid drawl of 40, and the machine-gun rattle of 400. The default value is a measured 150. To my ear, anything over 300 sounds garbled.

Parameter 3 – Voice

The default value is 0, that's a male voice. To try and turn your Amiga into a real lady, run the progam with the value 3,1 and you'll be a little disappointed. It's faintly feminine, but it sounds like one of those American TV chat show hostesses with razor-sharp little tongues who gargle in gravel every night. There's nothing wrong with your synthesiser – it's just an indication of how complex speech is, and how cleverly the Amiga copes with it.

Click on the List window, and change the parameter of the Data line (that's the Pitch parameter) to around 250, and then you are treated to a much more seductive sounding set of vocal chords.

Parameter 4 – Tuning

This parameter controls the frequency which is sampled in order to generate the best sound balance. To see what happens, try the extremely low and almost incomprehensible lower limit at 4,5000.

The squeal that comes from the upper limit is on 4,28000. The default value is 22200.

Parameter 5 – Volume

Here we are dealing with a simple volume control in the range 0-64. The loudest, 64, is the default. 0 is no sound. Run the program with the setting 5,5.

You can just about hear the sound.

►

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If you can't, chances are that the speaker volume control isn't turned up sufficiently. I could still just about hear the voice over the sound of the computer's fan and the wind blowing outside when the sound value was set to 1.

Parameter 6 – Channel

This is a little more complicated, and can best be expressed in terms of this table:

0,3 – sound is from the left audio output.
1,2 – sound is from the right audio output.
10 – any available left or right pair of channels for output.

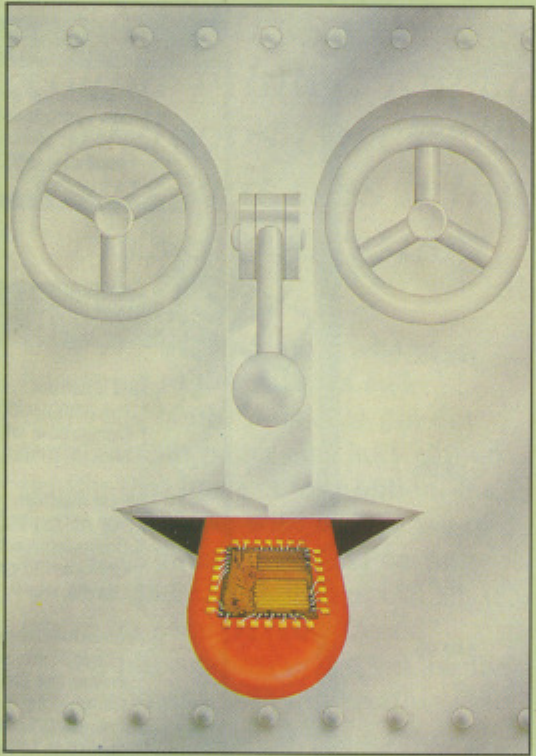
As you might expect, 10 is the default.

For fuller details, the AmigaBasic manual gives you a Channel assignment table on Page 8-132.

To find out what is happening in detail, write a loop assigning parameter 6 the values 0-11 and you can then determine the exact differences. In normal use, it's safest to keep this parameter at the default value.

Parameter 7 – Mode

At the default value of 0, the



synthesiser is in synchronous mode. The interpreter pauses until the speech act is over before going on to the rest of the program. The alternative, ascynchronous, value is 1.

If you set parameter 7 to 1, and printed "This is what I am saying" as the next program line, then the string "This is what I am saying" would appear as it is being spoken. With the default, the synthesiser speaks first, then the string appears.

Parameter 8 – Control

When the Mode setting is 1, the Amiga has to be told what to do in a situation when a number of Say statements come one after the other. The default is 0, in other words, one string is dealt with at a time. The other values either stop the string being spoken (1), or interrupt it (2).

● *So far, so good. But what about a program which demonstrates the benefits of speech and has a little educational value, perhaps? You'll have to wait until next time for that.*

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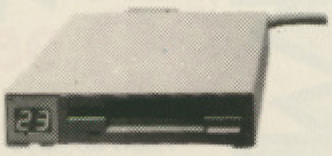
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True Colours

What's got 24 pins and looks good on paper? No, not a dozen Madonna clones, but the new model Citizen HQP-40 colour printer. Rupert Goodwins checks its forms and sees if this citizen's arresting

EVERYONE has a quest in life. Some spend years in silent contemplation on a Tibetan mountainside, some try to amass the definitive collection of Belgian stamps. And the sane own Amigas. For many of this last group of dissatisfied souls, there is but one route to Nirvana – the possession of the perfect colour printer.

But most of us have to compromise. The perfection of the glossy photographic poster is still out of reach somewhere in the financial stratosphere. The better ink jet printers will still leave the current account in need of an oxygen mask. However, there is a large choice of cheap, and not so cheap, impact printers for those who still dream but prefer to breath as well.

One of the not-so-cheap variety is the new Citizen HQP-40. Citizen, initially a Japanese watch maker and still ticking along as such, has recently set up a factory at Scunthorpe. Many Japanese companies are busy with such ventures, tempted both by the attractive packages offered in economically depressed areas and by the thought of having a production facility inside Europe when 1992 comes around and trade restrictions really start to bite.

Enough of the economics. The HQP-40 – boring name, whatever happened to the Valiants and Imperials of old? – is a 24 pin dot matrix, plain paper and inky ribbon printer that has a colour option. It's quite expensive, with a price tag of £559 and the rainbow bits costing another £50. Coming from Citizen it has to be good, but £600 good?

First impressions are of yet another printer. Finished in the legally required off-white, it has a set of buttons on the front poised above an intriguing flap. The first button chooses the type style from draft (as fast as you can, my man, I've got a train to catch), correspondence (for

▶



writing letters), letter quality (for writing quality letters) and prop spacing.

This isn't for airmail, rather it prints text with the space between the individual letters adjusted to look good rather than constant. This has the secondary effect of changing the length of words on the page, so any tables or structured text your word processor might produce will look mighty odd. Which is why Citizen puts the option on a button.

The next button selects the kind of font. Or rather it doesn't, because the HQP-40 only comes with the one font. Pressing the button makes a little light marked IC CARD flash in a yellowish way; this is nature's way of telling you to go out and spend another £35. More on this potential expenditure later.



Good with primary colours, but mixes are muddy

ANOTHER button is marked both Line Feed and Form Feed; press it briefly and the paper advances just the one line. Hold it down for more than a second or so and the rest of the page spools out. The final button is the On Line switch, and connects and disconnects the printer from the computer.

That flap, marked with a tempting Push, hides a healthy complement of DIP switches. DIP? Dual Inline Package, the jargon for the way in which the electrical connections leave the switch and completely irrelevant to their function, which is to control the way the printer works.

These switches, unlike the more public buttons atop them, only have an effect when the printer is first switched on and are thus used for more or less permanent settings. The 32 switches with which the HQP-40 is blessed set up things like the baud rate for the serial interface – the printer has both serial and parallel as standard – the type style in which the machine starts, how many lines to print to the inch, all that sort of thing.

Boring but necessary, and it's nice to see that these essential functions are easy to get at and to change.

Remember that flashing yellow light? This stroboscopic inducement to personal impoverishment is trying to tell you to plug in an extra font card. On the flap of plastic that covers the top of the printer is a sort of plastic sunroof, beneath which are a couple of slots. These accept cards containing a memory chip which can either hold a new typeface or a program for the printer to make it pretend to be something other than the Epson LQ-800 it normally imitates.

Other printers have adopted this approach before, but apart from laser printers, whose owners have resigned themselves to a costly life, it hasn't taken off.

The new wind of sanity that's ruffling the toupee of the printer world hasn't missed Citizen, as the sockets for the serial and parallel interfaces have moved from the normal back position to the right-hand side where they can't foul the paper. Or rather they wouldn't if I didn't usually put my printers to the right-hand side of my computers, but that's probably my fault.

HAVING both sorts of interface is useful, especially if the parallel port on Amy is tied up with a sampler or somesuch. Unfortunately, the power socket is still at the back of the printer, a problem mitigated because it's offset from the area where the paper enters and exits.

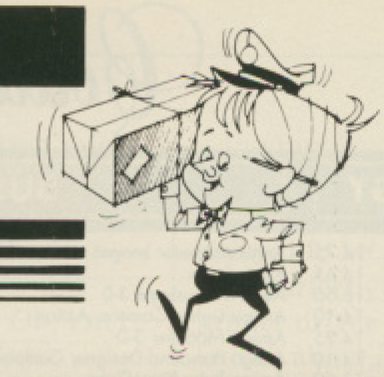
Paper movement is an area where many printers have problems. The Citizen has a wide variety of options to wind in the woodpulp, including an effective automatic paper load. Programmers, hackers and leaflet producers tend to use fanfold paper, whereas less ardent hobbyists and gamers with the odd letter to write prefer the single sheet.

The HQP-40 copes with both, coming as it does with a plate to hold sheets and a tractor mechanism to pull or push continuous stationery through the machine, as this collection of cogs and spikes can be mounted in two positions. Furthermore, the paper can enter either from behind or beneath, which means that most people should be able to slot the Citizen into their current layout.

The automatic paper load came as a surprise, since it sprang into action as I was trying to load up a single sheet without realising that the printer was capable of grabbing it from my hand. It was and it did, pausing only to position the paper perfectly before lining up the head. This, and all the many other options, are detailed in the manuals.

Unfortunately, the manuals fall down on a number of points. Firstly, and for no particularly good reason there are two of them – the User's Manual and the Reference Manual. Why? Goodness knows; where, for example, would you expect to find the DIP switch settings to make the printer start up in Letter Quality and where the code to tell your word processor to switch the printer into Letter Quality? One of these is in

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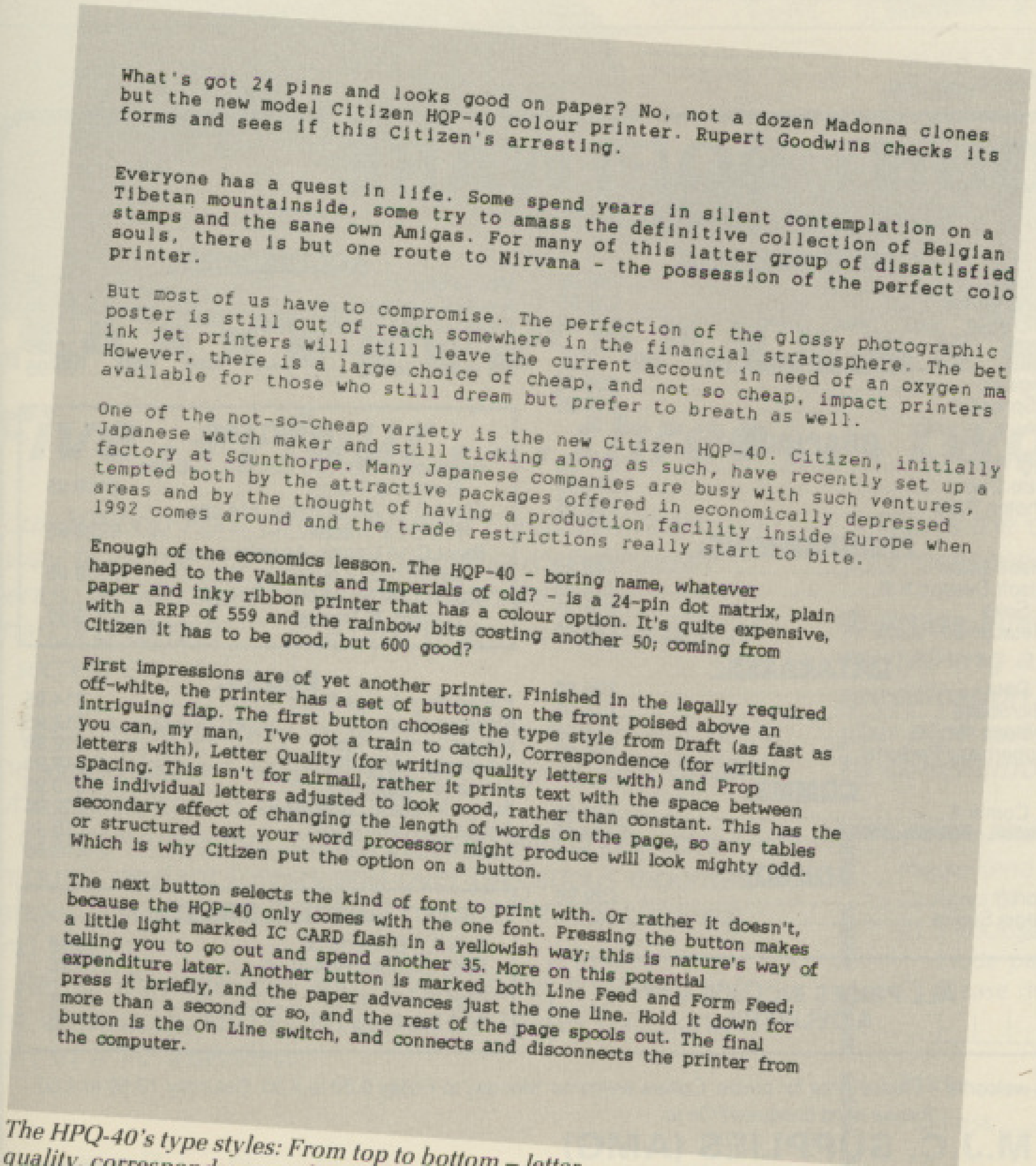
Secondly, the manuals are an odd shape, very tall and thin. No, not just reviewer's pique; I'd like to be able to keep them on the bookshelf with the rest of the books I might need in a hurry. They don't fit. They'll get lost. And for why? Ask Goodness again.

Thirdly, they're full of grammatical mistakes and structural flaws, the most glaring of which is the "lets get down to basics" Chapter 2. This tells you what words like platen mean. Unfortunately most of those words have been used in Chapter 1.

And lastly, they are sometimes plain wrong. For example. Commodore and Sinclair computers will, it states, "need a suitable converter to convert (their) output to parallel or serial format". Of my three Sinclair (I was young and foolish once) and one Commodore computers, not one needs such an adaptor. This could lose Citizen sales in the High Street, where wrong statements like those confuse shop assistants and purchasers alike. "What converter do I need for this Commodore Amiga then?" "Oh, I'm not sure. But the Epstrad printer doesn't need one".

There's more, but why labour the point...

BUT does it work, this printer? Yes it does. It produces output as good as anyone else's 24 pin printer, that is to say output which you would not be ashamed to show your maiden aunt. It's a shame that it sells itself short by only having the one typeface, Courier, which tries hard to look like a typewriter. In letter quality, it succeeds, too. Resulting correspondence is as good as most 9 pin printer's NLQ, only faster, and draft is fast and still quite acceptable.



What's got 24 pins and looks good on paper? No, not a dozen Madonna clones
but the new model Citizen HQP-40 colour printer. Rupert Goodwins checks its
forms and sees if this Citizen's arresting.

Everyone has a quest in life. Some spend years in silent contemplation on a
Tibetan mountainside, some try to amass the definitive collection of Belgian
stamps and the sane own Amigas. For many of this latter group of dissatisfied
souls, there is but one route to Nirvana - the possession of the perfect colo
printer.

But most of us have to compromise. The perfection of the glossy photographic
poster is still out of reach somewhere in the financial stratosphere. The bet
ink jet printers will still leave the current account in need of an oxygen ma
However, there is a large choice of cheap, and not so cheap, impact printers
available for those who still dream but prefer to breath as well.

One of the not-so-cheap variety is the new Citizen HQP-40. Citizen, initially
Japanese watch maker and still ticking along as such, have recently set up a
factory at Scunthorpe. Many Japanese companies are busy with such ventures,
tempted both by the attractive packages offered in economically depressed
areas and by the thought of having a production facility inside Europe when
1992 comes around and the trade restrictions really start to bite.

Enough of the economics lesson. The HQP-40 - boring name, whatever
happened to the Valiants and Imperials of old? - is a 24-pin dot matrix, plain
paper and inky ribbon printer that has a colour option. It's quite expensive,
with a RRP of 559 and the rainbow bits costing another 50; coming from
Citizen it has to be good, but 600 good?

First impressions are of yet another printer. Finished in the legally required
off-white, the printer has a set of buttons on the front poised above an
intriguing flap. The first button chooses the type style from Draft (as fast as
you can, my man, I've got a train to catch), Correspondence (for writing
letters with), Letter Quality (for writing quality letters with) and Prop
Spacing. This isn't for airmail, rather it prints text with the space between
the individual letters adjusted to look good, rather than constant. This has the
secondary effect of changing the length of words on the page, so any tables
or structured text your word processor might produce will look mighty odd.
Which is why Citizen put the option on a button.

The next button selects the kind of font to print with. Or rather it doesn't,
because the HQP-40 only comes with the one font. Pressing the button makes
a little light marked IC CARD flash in a yellowish way; this is nature's way of
telling you to go out and spend another 35. More on this potential
expenditure later. Another button is marked both Line Feed and Form Feed;
press it briefly, and the paper advances just the one line. Hold it down for
more than a second or so, and the rest of the page spools out. The final
button is the On Line switch, and connects and disconnects the printer from
the computer.

The HPQ-40's type styles: From top to bottom – letter quality, correspondence and proportional

In graphics mode, which is, I suspect, the one that most Amiga owners will be using, it manages to pretend to be an Epson LQ-800 well nigh perfectly. With the appropriate printer driver – Workbench 1.3 knows about all 24 pins – it makes an acceptable substitute for a full-blown laser printer when used with DTP programs like Professional Page or ComicSetter. And of course, there's the colour option.

The HQP-40 handles chromatics by means of a four-colour ribbon. By combining red, cyan, yellow and black it can approximate most of the colours that the Amiga produces. This ribbon sits on a hinged holder which is moved up and down by a motor; the upgrade from monochrome to colour consists of this motor and the ribbon and takes about three minutes to install. *(Well it took me five minutes to understand the diagram – Ed).*

AS a successful colour print can take up to six passes of the head – for a mixture of three of the colours each printed in double density – it's important that the paper stays still. As the paper is held best when it's being pulled by the tractor feed, this is the configuration that Citizen recommends.

The problem with colour – and this isn't Citizen's fault – is that there aren't any drivers that can properly handle the resolution. The best is the Epson JX emulation, which puts the printer into 9 pin mode. It's a very nice 9 pin mode, and quite fast, but still not getting everything out of the printer that it can offer. When I rang Citizen technical support to ask about a 24 pin driver, they hadn't heard of preferences and so told me about IBM control codes instead. "It doesn't help you", said the techie chap, "but it is information".

THE colour dumps that I got out of the machine were OK; there was still the occasional white line, and the paper had to be fed in just right to avoid distortions, but by and large they were acceptable. Bold splashes of primary colours on a white background came out especially well; large areas of black were liney

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and uneven.

The printer is a little noisy. Most 24 pin printers are, but most are quieter than the Citizen. Fortunately the paper handling is good enough to allow the machine to be left to get on with it in a broom cupboard or somewhere equally deadening, but having it on the same desk as one's ears could be wearing.

SWITCHING between colour ribbon – at £20, it needs to be eked – and black is not a simple business. Although the former unplugged easily enough, with the latter dropping in its place, it took a long time to get the printer to produce even text. The problem was that the thick flexible leads that connect the print head to the electronics inside the printer tended to push the ribbon out of alignment at one end of the line.

It wasn't clear how to stop this happening and it took a lot of experimenting to get it right. For an operation that's likely to happen quite often, that's disappointing.

I'm not sure whether this printer is worth the money. Adequate colour 24 pin machines can be had for several hundred pounds less, and usually come with a much larger range of fonts and special effects.

And if colour isn't really needed, then the range widens to include some excellent printers indeed; one thinks of the NEC 2200 which is superior to the HQP-40 in almost every respect and costs about half as much. To be fair, not many people buy printers at full price, but the HQP-40 has got a long way to come down to be competitive.

And if Citizen is trading on its name to sell the printer as a quality product, it should tighten up details such as the manuals and ribbon mechanisms. The overall machine just doesn't feel worth that amount of hard earned cash.

Verdict: Consider it on a par with the rest of the cheap 24 pin printers and judge the price accordingly.

REPORT CARD

HQP-40 printer
Citizen 0895 72621
£559. Colour option £50

USEFULNESS
Excellent jack of all trades copes with speed and quality. The colour option is an added bonus.

EASE OF USE
Well designed with external dip switches and good paper path.

SOFTWARE
The JX-80 driver could be improved upon. Gives good results with EpsonQ.

SPEED
The draft mode is lighting fast. LQ and NLQ are still pretty rapid.

VALUE
This will be widely discounted. One box shifter has the HQP-40 for £390 inc. but still faces fierce competition.

OVERALL **71%**
A great mono printer, adequate colour, documentation poor. A little pricey.

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Protext Preview

A word processor better than WordPerfect but at half the price? David Foster takes a close look at what Arnor has to offer

THIS is a preview of Protext, rather than a review, as it has been carried out on beta test versions rather than the final release and minor changes may well have taken place by the time this is published.

Protext is a *word* processor and makes no pretences of being a poor man's DTP program. It has no facilities for importing graphics into documents.

This is the first version of Protext to use a Wimp environment and a lot of thought has gone into integrating it with the feel of Intuition while retaining all the existing features and quick keystrokes which have largely remained common through all versions.

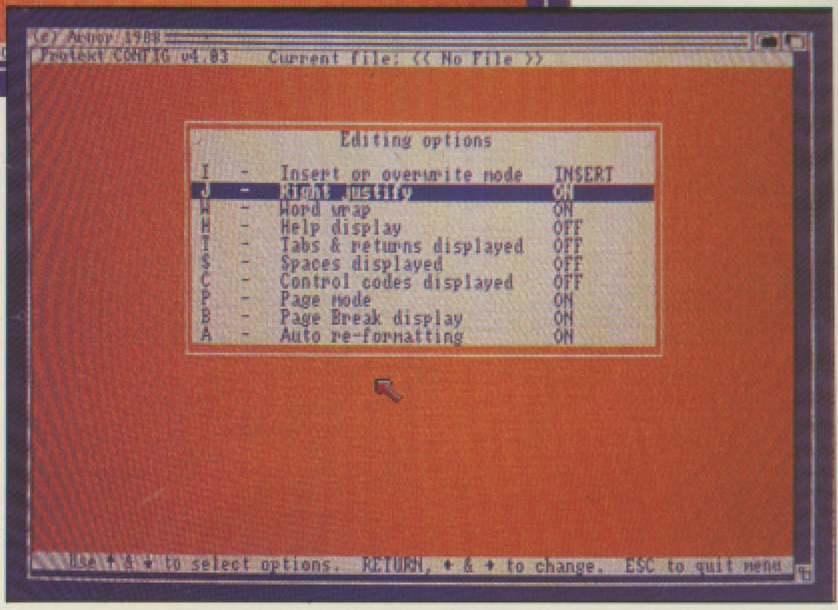
Protext comes on two discs, with an A5 ring bound manual, about which I shall make no further comment since I wrote it. Two versions of the program are supplied. The spelling checker is an integral part of Protext in the full version, but the second version has the spelling checker as a separate program to reduce its size and is for use when less than 1Mb of memory is available.

A comprehensive configuration program is provided to change settings of most aspects of Protext. Other utility programs create new printer drivers and convert files from other programs into Protext, or Ascii, format.

In common with WordPerfect, Protext does not use the standard Amiga printer drivers and a wider range of printers is supported by the supplied drivers, including the HP LaserJet, Kyocera and Epson GQ3500, together with the facility to create special drivers for virtually any printer. Only a single drive is necessary, but if a second one is available Protext will make full use of it, minimising the amount of disc changing required. Installation on to a hard disc is also possible.



Contig lets you set up the screen colours

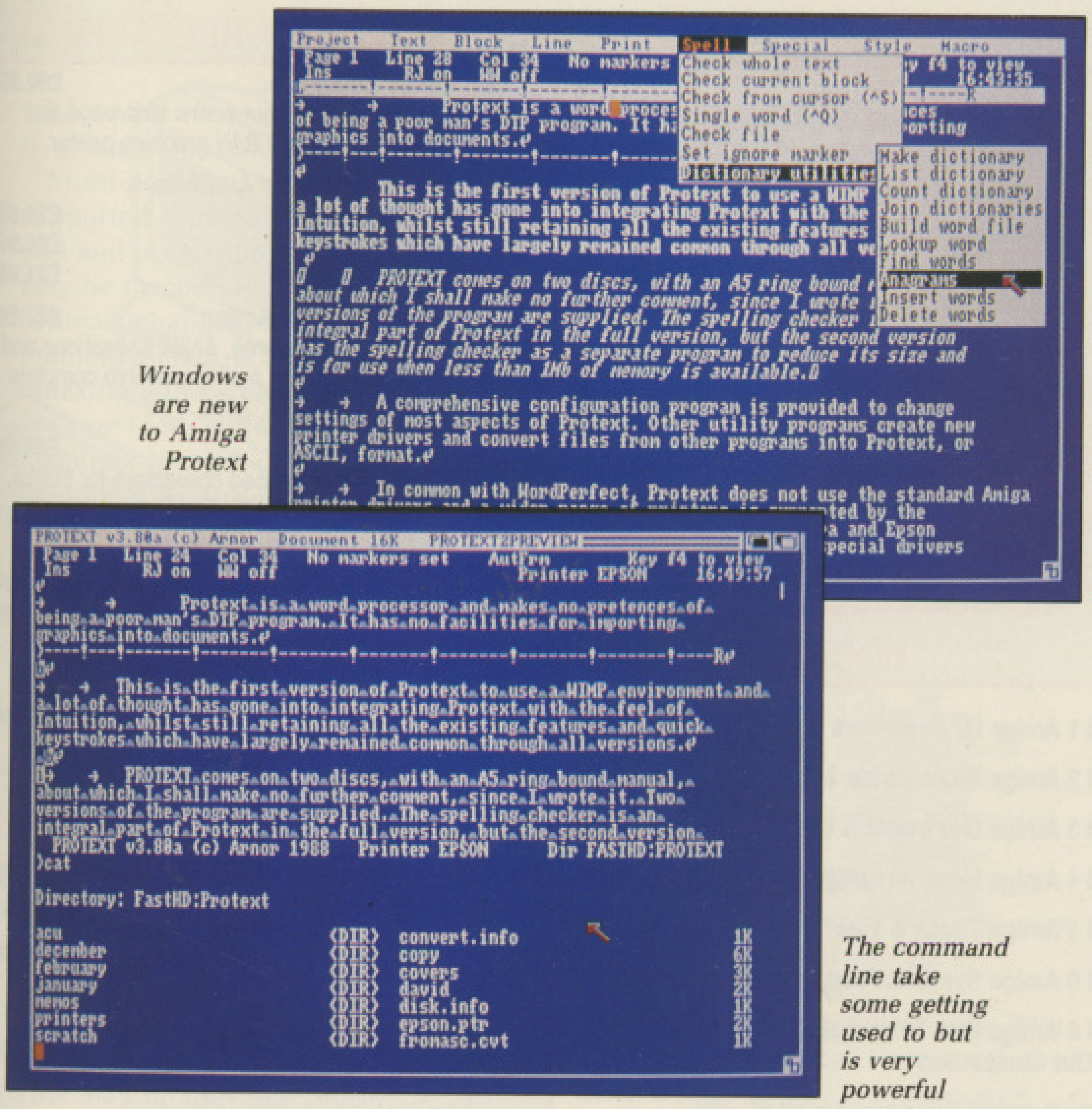


Setting the details is simple

It may be run from either Workbench or the CLI and may be loaded as part of the startup process if required. Once loaded, Protext displays a status line at the top of the window, giving details of various settings such as word wrap, insert/overwrite mode and details of page, line and column numbers.

Edit mode is where all entry and correction of text is carried out. You can select editing commands from pull down menus or by shortcut keystrokes. The pull down menus are standard Intuition type, but Protext does not make use of requestor boxes to use its own status line.

Movement around documents is fastest by using keystrokes, to move by character, word, line, paragraph,



Windows are new to Amiga Protext

The command line take some getting used to but is very powerful

screen, a page at a time, or immediately to the start or end of a document. The mouse can be used to move within a screen, but Protext does not use scroll bars. Positioning the pointer on the status lines or the bottom line of a document and clicking, scrolls the screen. Protext is not particularly well integrated into the Amiga environment.

NOT only is it possible to delete single characters to left or right, but also part or full words, or delete to the start or end of a line – all with single keystrokes. Unlike KindWords and WordPerfect, where you have to mark a line to delete it, lines can be deleted at a single keystroke without the need to mark blocks, although in practice you want to delete whole sentences which don't fall neatly into lines. *(Why can't someone produce a word processor with a delete to full stop keystroke? – Ed.)*

Characters may be converted to upper or lower case by positioning the cursor on the first character and using a shortcut keystroke. Two characters entered in the wrong order may be swapped round with a keypress. Small points, maybe, but they all go towards making editing quicker and more efficient.

In addition to all the usual block editing features which work with areas of contiguous text, Protext also has a Wordstar-like box mode, in which any rectangular block in the document can be marked and copied, moved or deleted.

Protext supports two file editing, which enables you to work on two documents, switching between them and copying text. When two file editing is in use, only one document is visible at a time, the complete window being switched. This is not as flexible as WordPerfect, which allows up to 32 documents, but it is a good deal faster.

Find and Replace are fast and powerful. Searches may be carried out globally, forwards, backwards, only on marked blocks, for complete words only, ignoring the case and either stopping at each occurrence for confirmation, or replacing automatically. Repeat searches require a single keypress rather than a return to the menu each time.

Up to 10 place markers and unlimited multiple markers may be positioned in the text for instant recall.

BOLD, italic and underline effects are displayed on screen and may be in any combination. Super/subscript and enlarged/condensed printing are supported but are not displayed on screen. All the usual variations of "non-break" spaces and hyphens are available, as well as soft hyphens.

The screen display may be toggled so that control codes are shown to make re-editing text easier, rather like working in WordPerfect's reveal codes window. Protext can handle fully proportional, right justified printing and micro-spacing with suitable printers.

Any number of rulers may be incorporated into documents and there is no limit to the number of tabs. Rulers are typed into the text where required and may be moved, copied or deleted. Both normal and decimal/right justify tabs are supported, as well as indented left and right margins.

Default settings for most things, from page dimensions to what mode Protext starts in, may be configured to suit in Config, but may be over-ridden at any time by the use of stored commands. These are entered into the text, but are acted on by Protext rather than printed. A stored command takes the form of a "greater than" symbol at the start of a line, followed by two characters such as

▶

David Foster is self employed and has never been an employee of Arnor Ltd, although he has been responsible for writing some of Arnor's manuals on a freelance basis and has carried out beta testing of new versions on a number of different computers, including the Amiga version of Protext.

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>PA to force a page break, or >LS 2 to give give double line spacing.

Multi-line headers and footers are supported. These may be different for odd and even numbered pages and may be turned on or off, or the contents changed, at will. A simple footnote facility is also included, but indexing and contents generation are not provided, although with a bit of ingenuity it can be achieved using the mail merging stored commands.

Command mode on the Amiga has less importance than with versions for other computers, as all loading and saving of text files and disc file management can be carried out from edit mode, using the pull down menus. But a press of the Esc key – or a click in the appropriate menu – will take you into command mode.

IN command mode the lower part of the screen beneath the status line clears, and a command prompt similar to the CLI prompt appears. This may be used for loading, merging and saving text. Many other tasks may be carried out from command mode, including RUNning other applications from within Protext.

Macros and exec files are two further features of Protext. Exec files are created as normal text files and may contain a mixture of editing and command mode commands. Exec files may be run at any time and the commands are read from the file and acted on as if they had been typed in at the keyboard.

Exec files provide an ideal method of automating frequently used sequences of commands. Protext can also be configured to run an exec file when it loads. This might contain commands automatically to copy the dictionaries into RAM: and load a special macro file.

Macros, sequences of keystrokes that may be recalled with a single designated keystroke, may be a mixture of editing commands, text or command mode commands and Protext has a "learn mode". Press Ctrl-F1 and then specify the key combination to be used to call the macro, and from then on Protext will store every keystroke until Ctrl-F1 is repeated to end the macro. Macros

IN THE BEGINNING . . .

Protext and Arnor are names that will probably be new to many Amiga owners, although they are well known to owners of other makes of computer.

Protext started life as a source code editor called Maxam for an assembler for the Amstrad CPC and received so much comment about its speed and efficiency that Arnor was persuaded to produce a word processor based on it. The resulting program was called Protext, and fully integrated mail merging and spell checking programs followed.

Protext was then completely re-written for the Amstrad PCW, incorporating further enhancements.

Arnor then moved on to the IBM PC and compatibles, and yet again re-wrote the complete program with more features, to take advantage of the PC's features. This was followed by a version for the ST.

Arnor has now turned its attention to the Amiga and following the usual pattern, it is not just a simple "port it across from another computer" effort, but a program written to make full use of the Amiga.

may be saved for future re-loading and may also be edited by loading into Protext as a text file.

The package has powerful mail merging features in the form of stored commands. Data files can be created as normal text files, or database export files can be used. Once data has been read from a data file, it may be manipulated and used in a document.

Text and numeric data can be split and merged together. Mathematical calculations may be carried out on numbers. Conditional printing is supported and requests for user input may be made during the course of printing.

MAIL merging is almost a misnomer for this aspect of Protext, as it really amounts to a complete programming language. To make life easier for those who are not keen on programming, Arnor also markets two further programs, Protext Filer and Protext Office, which are largely written in the stored command language and provide flexible menu driven data filing, mail merging and invoicing systems for use within Protext.

Spell checking may be carried out in several different ways, and when the full program is in use it may be carried out as text is entered, with Protext checking the spelling as each word is completed. This is at its best when the dictionaries are either on a hard disc or a ram disc. Alternatively, single words may be checked at any time.

Complete documents can be checked, and this is often the fastest method. Either the document in memory may be checked, or a text file from disc. The small version of Protext with the separate spelling checker will only work with disc files. Speed of checking varies according to how it is being done but, with sufficient memory and the dictionary in memory, speeds of up to 10,000 words a minute are possible.

Multiple dictionaries are supported and new dictionaries may be created. Unrecognised words may be added to dictionaries, ignored, corrected during checking, or Protext may be asked to suggest suitable alternatives and the correct one inserted into the text. It does not do this automatically, which is a bit of a bind if you are used to WordPerfect.

The supplied dictionaries are British English, rather than the American variety and contain about 70,000 words. You can view the contents of dictionaries, and add or delete words. Two commands, ANAGRAM and FINDW, are provided for crossword and word puzzle fanatics.

Printing is flexible, and Protext can print part or all of a document, a specified number of copies, certain pages only and odd or even pages only. Different printer drivers may be loaded so that draft prints on one printer may be followed by final prints to another. Text may be printed to a disc file if required, or to the screen, so that you can view the final layout of headers and so on.

What doesn't Protext have that some programs do? Well, for a start, unlike WordPerfect, it doesn't have a thesaurus, an outliner or true multi-column editing. The thesaurus I can live without, preferring the paper

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variety, but I would love to see an outliner, as I find them very useful.

Multiple columns can be achieved by using box mode to move text alongside other text just before printing, but no further editing of that section is then possible. Other than the above features and split screen editing, there is little I can think of that you could possibly want.

I make no apologies if this preview sounds full of praise. I have used many word processors on different computers, and Protext is one of the few that seems to have evolved as a result of feedback and suggestions from users, rather than at the whim of the programmer or the marketing department.

Protext isn't perfect – is any program? – and there are still a few features that I would like to see, but there isn't much missing. What there is works well and quickly. What more could you ask of a word processor?

EDITOR'S EXPERIENCE

I used Protext on the little Amstrads for many years before going over to WordPerfect on first the PC and later the Amiga. I have written many thousands of words with each. People tend to get emotional about word processors, but I would like to think that I have equal loyalty to the two programs.

Having spent a month using a pre-release version of Protext I have decided to use the British software in preference to the colonial code.

They both have faults but WordPerfect is better integrated into the Amiga environment. They both have irritating features in the spell checker. WordPerfect thinks that numbers mixed with text – as in Friday 13th – is a spelling mistake, and Protext can't learn words with mixed case – as in AmigaDos – which is a habit beloved of Amiga software developers.

Protext is faster. The speed of moving around a document is important but it was not until I popped back into WordPerfect that I noticed how much more quickly the Arnor product runs. This article took less than two minutes to spell check.

Because Protext uses a lot of ram few people will have the space to multitask it.

A buffer is used for printing and this takes a while to fill. I would have preferred a separate task which would allow me to continue typing as soon as I had issued the print command.

The beta test version shows signs of being rushed, ported from the ST version and Amigaised. If the improvements are done properly before the software goes on sale it will be wonderful.

Even as it is, Protext is merely the best word processor available for the Amiga.

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Penny wise, pound wise

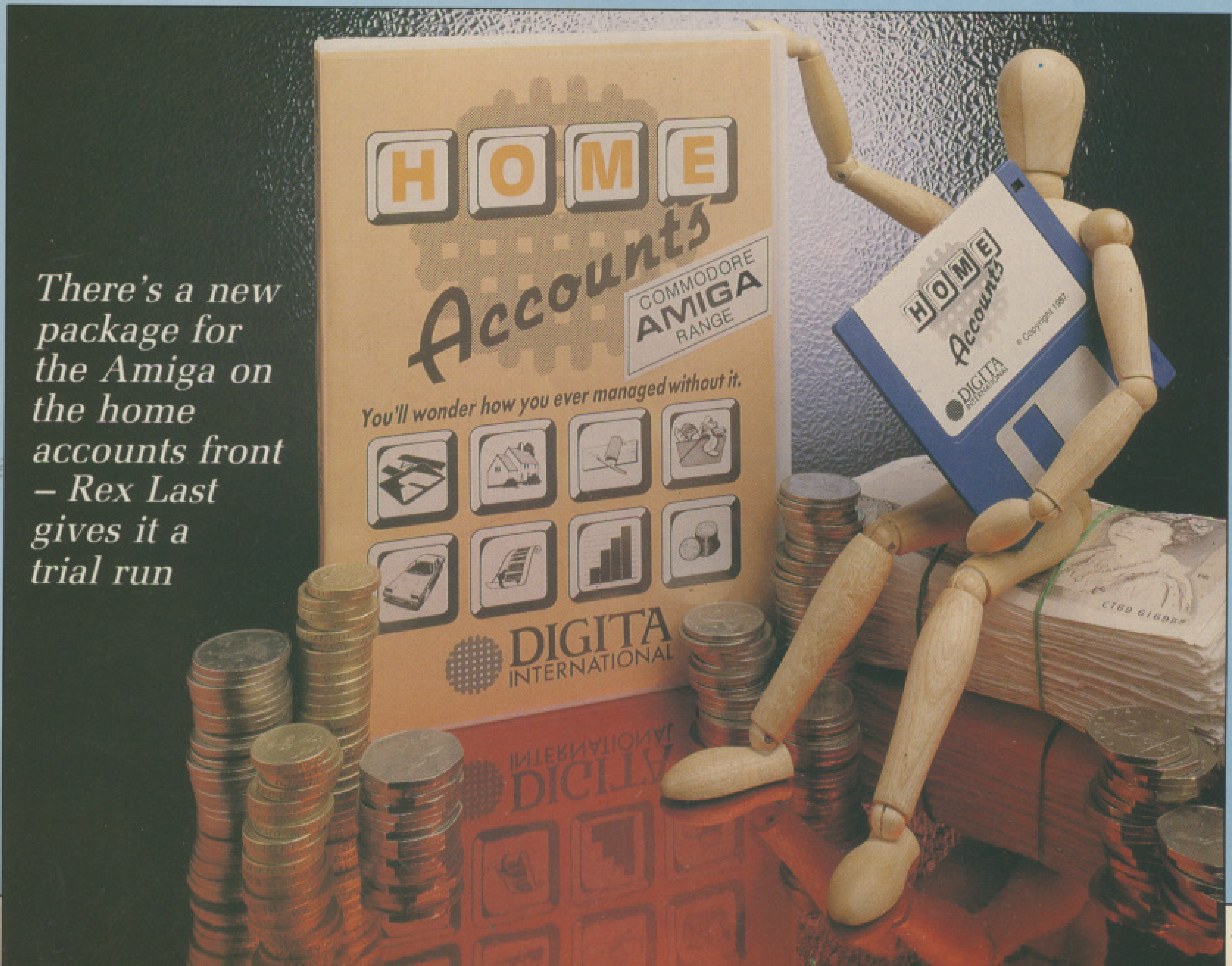
I MUST confess that I'm more than a little cynical about programs which over-techonologise fairly simple transactions which can be achieved perfectly simply by hand. I am going to take a lot of persuading before I can be convinced that it is worthwhile keying in humdrum transactions into the Amiga when I can get a statement of my account at the bank twice a month.

In fact, as a user of the Bank of Scotland's HOBS system, I can call up their computer more or less any time of the day or night to find out how red the situation is.

But there are many people who like to keep a close check on the money flowing in and out of the household and this may just be the program for them.

It's pretty clear that Digita is determined to established a strong foothold in the non-games Amiga market. This product, like others of theirs I've reviewed, is professionally packaged and comes with a well produced, helpful and informative manual. The one exception to this are

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There's a new package for the Amiga on the home accounts front – Rex Last gives it a trial run

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the screen shots which were taken on a foggy November evening.

When you crank the system up your prime objective is to set up your accounts. After the date has appeared in a window for updating, the screen goes worryingly blank with 10 little rectangles sitting across the bottom.

The manual comes to the rescue. Select Account from the menu bar then New, and up pops a set of details to be filled in for a new account. The account number, name and type are straightforward enough. Then comes a *Warning limit Max* and a similar *Min* warning, initially set to off. The concept behind these upper and lower limits is to warn you when you have too much in an account, and it could benefit from being shifted into an interest bearing account.

The Min warning speaks for itself – the all too familiar moment when there is too much month left at the end of the money.

Having entered the details which identify your accounts, these are displayed in summary in the boxes at the foot of the screen. Task number two is to establish the number of types of income and expenditure which you require.

Each type is identified by a code of up to four letters, plus a longer explanation of what it stands for, so "PTRL" could be petrol, for example. I supposed calling it "PET" could cause some disasters with the family dog being fed a mixture of four-star and GTX oil, so a little care is called for here.

ONCE that is completed, the next step is to set up a budget which is designed to bring together the accounts you have defined, the income/expenditure types, and a monthly notional allocation, which of course doesn't have to be uniform throughout the 12 month period. Fuel bills will almost certainly vary, but mortage payments tend to be more stable – at least, they used to be until the last year or so.

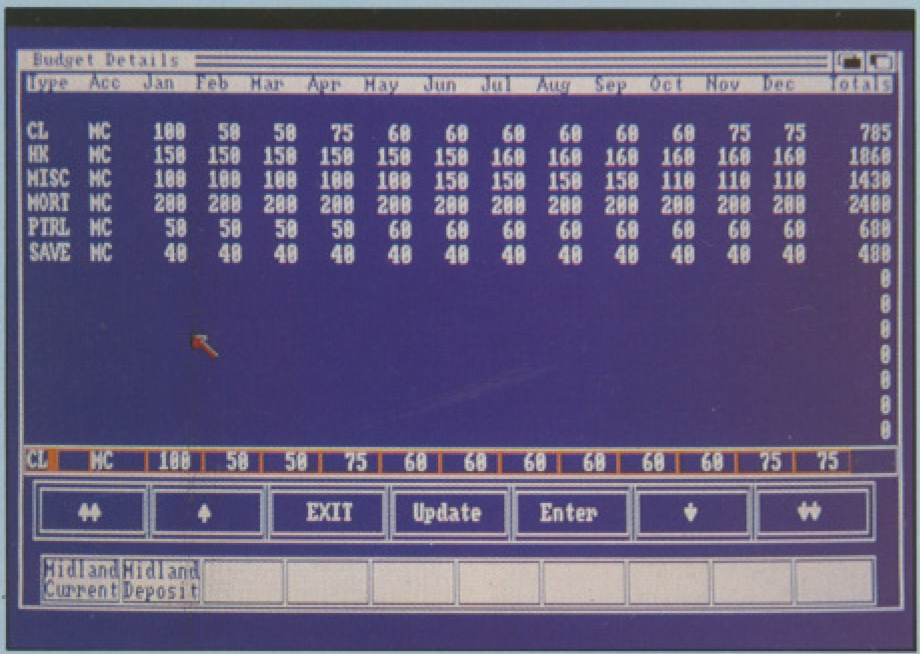
I got myself tied in knots a bit when trying to type in a year's petrol allocation. Under Acc for account, I managed to type in a monthly sum by mistake, and it took a bit of time to unscramble myself. Why, I wondered, doesn't the package only allow you to key in Types and Accounts already predefined?

WELL, it does warn you – but not until you've typed in the whole dozen figures, and I lost my carefully calculated list the first time. Probably me being stupid, but a little more idiot-proofing at the point of delivery could be called for here.

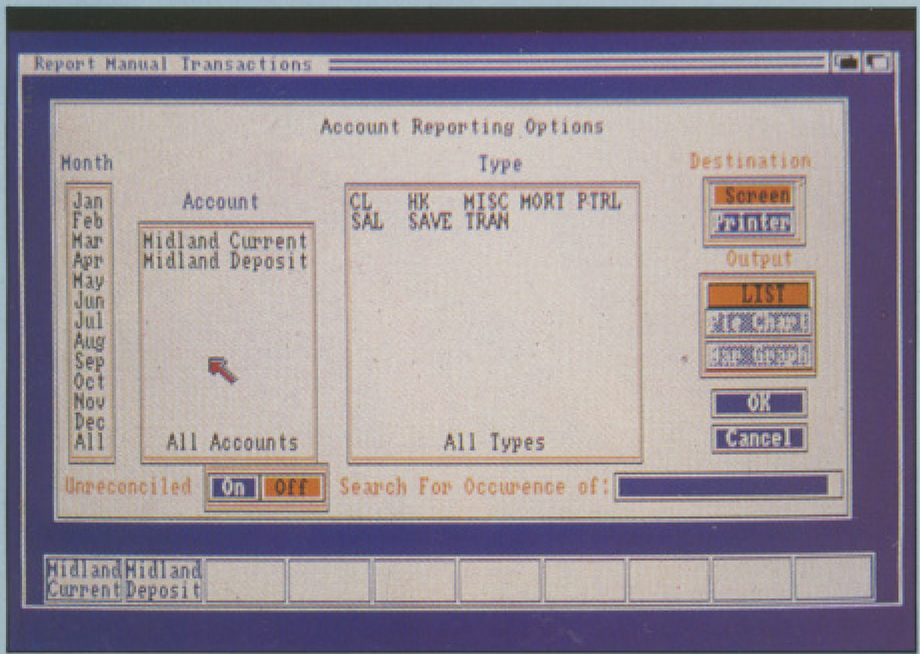
Still, the concept was beginning to build up clearly now. The package offers you:

- A number of different accounts defined by type.
- A list of income/expenditure types.
- An annual budget set out by account, income/expenditure type, and laid out monthly.

Now we move on to the next stage ►



Viewing budget details



Reports can be sent to the screen or printer

Why home accounts?

Home accounts programs are one of a class of increasingly popular packages which have been around some time on machines perceived to be more business than pleasure.

With home accounts you have to be careful. If the package is designed for a family with one income, a semi, 2.4 children, Volvo and Labrador, then it may not be much use to a freelance writer with several different accounts, an overdraft as long as your arm and wildly varying commitments.

So check in advance that the parameters of the package fall within your requirements. And – oh yes, do make your mind up as to whether you really need one at all.

If you want to go into the matter in full earnestness, then maybe it would be worth your while investing a little more time and effort into a full-blooded spreadsheet like Digita's excellent 9 out of 10.


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with these features:

- A list of regular transactions with specifiable frequency.
- Then you set up manual transactions.

All this information can be readily inspected and edited – once I get the hang of it – and you can activate transfers when you alter the date on the package. So if the date is moved to December 25, all regular transactions which fall due between the previous date and then will be made and the account appropriately updated.

Once all the details are entered, you are ready to go live and watch yourself spiralling into the red from the comfort of your own computer. I suspect, though, that the most useful aspect of this system is the option to inspect the relationship between budgeted and actual expenditure. This changes as soon as you alter individual items of information, and acts as a kind of mini-spreadsheet.

And my overall verdict? If it's the kind of package which you would find helpful in your money management, and if the way in which it functions suits your needs, then there is no question that Digita has come up with another polished piece of professional software.

ME? Quite honestly, I'm going to wait until the day dawns when I can download from Prestel my Home and Office Banking accounts and merge them with a package like this to establish expenditure patterns. I suspect that day isn't far distant. In the meantime, I'll try and remember what I spent on the mortgage (did I update the amount?), the airline tickets (have I paid back Amex?), the local supermarket (was it fifty pounds or a hundred and fifty?) ... and so it goes on.

Maybe I'm basically untidy and don't like being reminded of the fact by a mere machine. Still, you may love Digita's Home Accounts and save yourself a fortune in bank charges.

REPORT CARD

Home Accounts
Digita International
£39.99

USEFULNESS
If this is the kind of package you want – and you can keep it updated, fine. The budgeting feature is potentially very useful.

EASE OF USE
Clear and consistent, once you get the hang of it. Has the feel of a competently written suite of programs about it.

INTUITION
Will multitask but has been ported from the ST and it shows.

SPEED
OK it is fast but a calculator and pile of bank statements may be faster.

VALUE
Again, depends on whether you feel you need this kind of program.

OVERALL *66%*
It is difficult to justify the time needed to use the program.

clik

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HARDWARE PRICE LIST

Title	S.S.P	Our Price
A500 Computer (Built in 3.5" Disk Drive) (Amiga Dos, Kick Start, Work Bench 1.2, "The Very First", Mouse	£399.99	£350.00
A500 (as above) with the 1084 colour monitor	£699.99	£620.50
A500 Business Pack	£803.85	£750.00
A500, 1084 Colour Monitor and AF880	£705.99	£665.00
AF880 (on/off switch thru port) Disk Drive	£110.00	£95.50
MPS1200C Disk Drive	£140.99	£125.50
1084 Colour Monitor	£349.99	£290.00
1084 Colour Monitor & TV Tuner	£305.99	£287.00
TV Tuner	£99.99	£91.50
Cumana Amiga Drive Cax 354	£99.99	£91.50
Cumana Amiga Drive Inc PSU Cas 354	£150.99	£125.00
Amiga Genlock (A500)	£299.99	£260.00
RF302C Slimline Amiga 2nd Drive	£105.99	£98.50
A501 0.5Mg Ram Upgrade	£175.99	£150.00
A2000 (B)	£1489.25	£1275.00
A2000 (B) with 1084 Colour Monitor	£1782.50	£1439.00
A2058 (8Mb Ram board-populated with 2Mb)	£746.35	£620.00
A2088 XT Bridgeboard	£607.20	£555.00
A2286 AT Bridgeboard	£1148.85	£995.00
A2092 20Mb MSDOS Hard Disk	£402.50	£375.00
A2300 Internal A2000 Genlock	£286.35	£250.00
A2010 Internal 3.5" Floppy Disk Drive	£182.85	£159.00

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A2620U Unix Card	£1956.15	£1755.00
14" Cotron Hi Res Colour Monitor	£747.50	£650.00
20" Cotron Hi Res Colour Monitor	£2070.00	£1879.00
Cherry Pad A3 Digitising Tablet	£632.50	£565.00
Video Driver Card (must be sold with Cotron)	£396.75	£350.00

A2000 Special Offer (whilst stocks last)

Title	S.S.P	Our Price
A2000B Computer with 1084 Colour Monitor and A2090/2092 20Mb Amiga Hard Disk	£2241.35	£1970.00

PERIPHERALS

Title	S.S.P	Our Price
Disc Box (Holds 50 Discs)	£22.50	£10.50
Disc Box (Holds 100 Discs)	£32.95	£13.50
Clik Mouse Mat	–	£5.00
Pro 5000 Joystick	£23.99	£14.50
Ram Delta Joystick	£15.99	£9.50
Speed Kings Joystick	£19.99	£12.50
Alsop Universal Printer/Monitor Stand	£15.99	£9.50
Citizen 120D Printer Ribbons	£9.99	£3.50
10 Blank Discs with Box	£25.99	£13.50
Disc Drive Head Cleaner	£14.99	£8.50

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Blastball	£9.99	£5.50
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Eagles Nest	£19.99	£12.50
Extensor	£9.99	£5.50
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Feud	£9.99	£5.50
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Title	S.S.P	Our Price
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Tetris	£19.99	£12.50
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PLEASE CHECK AVAILABILITY ON SPECIAL OFFER PRODUCTS

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Adrum	£39.99	£32.50
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Arts Part 2	£9.99	£7.50
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Award Maker	£39.99	£29.50
Aztec C Professional	£199.99	£132.50
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Butcher II	£29.99	£21.50
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Amiga Answers

Library choice

Q *I program in Amiga Basic and would like to know which book you recommend on the subject of libraries. What is a hard disc and what does it do?*

G. Evans
Dyfed.

A We recommend Advanced Amiga Basic by Tom R. Halfhill and Charles Brannon published by Compute! Publications, Inc. ISBN 0-87455-045-9, £14.95.

A hard disc is a high capacity storage device which ranges in size from 20 Mb to 150 Mb. Your normal 3.5in floppy disc holds 880k of data formatted but a hard disc can hold 20, 40, up to 150 times as much, and it has very fast access times as well.

Using a hard disc, programs load around 10 times faster. The result transforms the Amiga.

Listen up

Q *How can I load a sound file for playing in Amiga Basic? I am thinking of buying the Trilogic Audio Digitiser. As I only program in Basic and have the public domain software of Perfect Sound I was wondering if I could use that for my samples? How can I make a file with ED so that I can type the filename and not use EXECUTE ?*

N. Lines,
Coventry

A Amicus Disc 13 contains routines to load and play IFF sound files from Amiga Basic, and you can obtain this disc free if you join ICPUG (01-346 0050) or you can buy it from Cavendish Commodore Centre (0533 550993).

You can use ProSound software with the Trilogic digitiser and use the above routines to play them back from Basic. ED is a screen text editor which is used to create text or a batch file.

You can create a text file to read or a batch file of executable commands for Amiga Dos to load. It is not possible to create a file from it that will execute itself.

Solve your Amiga anxiety with a letter to Amiga Answers. Our panel of experts is ready to sort out all kinds of tricky problems. From machine code to midi, communications to compilers. Whatever your question our team will find the answer.

We cannot deal with enquiries personally so please don't send an SAE. But we do need loads of questions. So write to Amiga Answers, Amiga Computing, North House, 78-84 Ongar Road, Brentwood, Essex, CM15 9BG.

Loading lament

Q *I have had my Amiga for nearly a year and it has recently started having problems loading commercial software. Is it possible that the drive heads could be out of alignment. If so what is the easiest way to cure this ?*

D. Brooks,
Berks.

A Although it is possible that your drive may be misaligned, it is more probable that the heads are dirty. The cure for this is simple, just pop down to your local computer shop and buy a head cleaning kit. They are relatively inexpensive and easy to use.

If the symptoms persist take your Amiga to your nearest authorised dealer who will realign the drive for you. Don't overdo the use of a cleaning kit as you can damage your drive.

In a spin

Q *I have recently bought an Amiga A500 and among the free software was a copy of the game Wizball. The problem with this game is that after loading, the disc drive does not stop.*

As the Amiga manual recommends you do not remove a disc when the drive light is on, how do I get out of the game? Can you damage the drive taking a disc out while the light is on? Can this continuous use of the disc drive damage my drive? Is this a form of software protection?

N. Haworth,
Lancs.

A To quit the game all you have to do is to press Ctrl-Amiga-Amiga (the normal three key reset). You can't damage your drive if you remove a disc while the light is on, but you can severely damage the disc where this particular game is concerned, as the software is just spinning the disc, the head is not actually accessing any information. This isn't likely to be any form of software protection.

Quick lead

Q *I recently bought an Amiga A500. Would you please tell me what I need to do to connect up my Riteman F+ printer to it?*

R. Finlay,
Essex.

A If your printer has a Centronics port all you need is a cable which you can obtain from Trilogic (0274 691115). They will make you one to order, the charge being £6.99 for one metre and £9.99 for a three metre cable.

Sound wave

Q *Can you recommend an audio digitiser? And how useful is the WAVE command in Amiga Basic? I have been led to believe that this*

▶

command can turn my computer into a true synthesiser. Is this true?

P. Benson,
Essex.

A A good audio digitiser in the budget range is now available from Trilogic (0274 691115). It is compatible with all digitising software on the market. Trilogic has just released the MK II version at £27.99. If you can stretch to it, look at the Eidersoft digitiser which came top in the review of samplers in our July issue. Eidersoft is on 0372 67282.

WAVE adds versatility to the SOUND command by allowing you to design nearly infinite variations of waveforms. You can mix two or more together to get the effect of multiple chord notes from a single voice. You use the sound statement to play those waveforms. As for turning your computer into a synth, unlike its predecessors, the Amiga has a sound system that is completely waveform-orientated so you are not limited to one or a few waveforms chosen for you by a sound chip or synthesiser manufacturer.

You are free to design or sample your own waveforms, so in theory you can write a program to produce virtually any kind of sound. It is just about one of the best synthsisers on the market.

Sprite artist

Q *How can I call up and use a Deluxe Paint picture file as a background screen for my Amiga Basic games? Can a brush in Deluxe Paint be turned into a BOB for incorporation into my programs?*

What in your opinion is the best book to read to actually start writing assembly code programs? Before spending large amounts of cash on a sound digitiser, are the results easily incorporated into my own programs?

P. Derrick,
N. Yorkshire.

A Most of your questions will be solved instantly if you obtain the following two Amicus discs from either ICPUG (01-346-0050) or from Cavendish Commodore Centre (0533-550993).

Amicus 11, contains a program called brushtoBOB which converts IFF brushes to Amiga Basic. Amicus 13 contains routines from Carolyn Scheppner of CBM Tech Support to read and display IFF pictures from Amiga Basic, and documentation.

Also included is a program to do screen prints in Amiga Basic, and the newest BMAP files, with corrected ConvertFD program. Also example pictures and the Save ILBM screen capture program.

There is a variety of example programs in the BasicDemos drawer on the Amiga Basic disc. They are well commented, and you should print out the listings, study them, and incorporate the required parts into your own programs.

One of the best books to ge' started in assembly language is First Steps in 68000 Assembly Language by Robert Erskine published by Glentop, ISBN 1-85181-0811, £12.50.

Golden disc

Have you ever fallen in love with an £700 shoebox? No? Perhaps your Guccis couldn't handle 30 megabytes. Rupert Goodwins goes for a drive



"Dear Santa. Because I've been a good Amiga owner all year, didn't pirate StarGlider II and was even nice to Spotty Smith the ST owner, this is what I want for Crimbo. First, some more memory. Then another floppy disc drive. Then a three zillion dots per micrometer photographic quality colour laser printer. And finally a hard disc drive."

Love, Simon.



THIS is the heartrending plea found stuffed up the chimneys and down the storage heaters of many an Amiga 500 owner come Christmas. Santa, a kindly chap but now privatised to the point where his team consists of two part-time gnomes and a pink-nosed Jack Russell, might scratch his beard at the first two requests, guffaw at the third . . . but the last? A hard disc drive? Who does he think I am, Father Christmas?

Sad to say, hard disc units are teeth-suckingly expensive. The subject of this review, the SupraDrive 30 megabyte SCSI hard disc, dents the plastic to the tune of some £700. Considering that this sum would purchase around 800 megabytes of floppy disc, there would have to be something pretty special about the harder variety. And there is.

The SupraDrive comes in two parts: The hard disc itself, the same width, depth and half the height of a shoebox, but much heavier, and the SCSI interface, which is about the size of a size 13 trainer. This (no, not the shoe) plugs into the expansion slot on the right-hand side of the A500 and has a huge socket on the back. This in turn connects, via a huge cable, to a socket on the back of the disc drive itself.

The drive has another, slightly smaller, socket and a mains connector. The second socket is there as part of the SCSI standard – SCSI, pronounced Scuzzy, stands for Small Computer Standard Interface and is so clever it gets a paragraph to itself later. Plugging in the disc drive to the mains completes the hardware installation.

Unlike many peripherals, the sequence in which the SupraDrive and the Amiga are switched on is important. The manual advises that the drive is turned on 30 seconds before the Amiga, and turned off after the computer has been powered down. This might seem annoying, but not in the same league of mental anguish as the dead computer and fried interface that the manual warns of should shortcuts be taken.

If all goes well the first time you counts to 30 nothing much happens. The disc drive whirrs at about the noise level of a Hoover in the next room, and the usual upside-down disc icon appears on the monitor. For, due to some ancient design decisions, the Amiga cannot start up from a hard disc with Kickstart 1.2. A floppy disc is still needed to get the computer going.

The floppy supplied with the SupraDrive contains the startup sequence that tells AmigaDos all about the hard disc. This process is fairly fast, since as soon as the hard disc software is installed the Amiga can load Workbench from the SupraDrive and forget about the floppy. And loading from hard disc is some four times faster.

Once into the Workbench, there are surprises in store. For a start, there's about 140k less memory free. And there are five more icons which look not unlike the disc drive and are indeed labelled SupraDrive and SupraDrive 1 to 4. Clicking on these reveals that the Amiga considers each to be a separate drive, with its own windows and sets of icons.

SUPRADRIVE has all the standard Workbench bits and pieces; Basic, Say, the CLI (command line interface) and so on. The other four icons reveal nothing – they are blank, ready to receive almost 30 Mb of your favourite programs and data.

To help transfer stuff by the floppyful into the SupraDrive, a program called CLImate is provided. This is a picturesque alternative to the CLI COPY command; it displays a list of files on one device – like the floppy – and lets the user select all or some of them with the mouse before copying them on to another – like the SupraDrive. There are various other facilities like MakeDir and, although it doesn't do much more than the CLI can, CLImate is much friendlier.

The five icons on the Workbench correspond to five partitions – a way of making the acres of space on the SupraDrive easier to handle. The Amiga thinks there are five separate hard discs called DH0: to DH4:. You thought the areas were called SupraDrives?

Owning a hard disc is like owning a fast car – it's necessary to know a lot about driving before you can make the most of it. And the hard disc reveals, with no punches pulled, the darker side of the Amiga. The bright, happy, icons, windows and mice interface that is the Workbench hides a lot of information – information that you must have to use the hard disc. And the key to it all is the CLI.

If you're already clear about the ▶

Transformation scene

The SupraDrive is excellent in daily use. After about a week of learning more of the intricacies of AmigaDos than I thought existed, I had installed a healthy selection of software and written a few CLI programs to make them work more or less as I wished to. ComicSetter was a transformed program, since having six discs' worth of clip art only a mouseclick away made experimentation not only possible but painless. And shuffling IFF files between DeLuxe Paint and Photon Paint, and text between Word Perfect and Professional Page was wonderfully simple.

For the first time, the idea of writing a major chunk of software on the Amiga was attractive. Likewise, with all the tools to modify text and graphics to hand, using DTP to produce a magazine seemed almost irresistible. The days of requesters asking me to "Replace WB 1.2 (GB) in any drive" were forgotten – it was like having a new computer. And they want it back... perhaps I can emigrate.

◄

CLI, own the AmigaDos manual and have spent many happy hours diving in and out of subdirectories, adding ASSIGNs and pondering PATHs, then there is little in the SupraDrive to shock you. But otherwise there is a lot to learn before the hard disc can be configured exactly to taste.

For example, just copying a program on to DH2: might not be much good if the startup sequence for it makes many references to DF0:.

To be fair, the manual does have a good section on installing applications, and what to do if something seems not to work. And many programs have a simple hard disc installation procedure anyway, especially those like Professional Page which are likely to prompt you into biting the bank balance and buying a hard disc.

But there are many places where it's necessary to dive into Dos. So be prepared, and regard the AmigaDos manual as a must have.

Once this point is passed, and some confidence is gained about the way the disc and AmigaDos interact, some of the more dangerous ideas can be tried. It's possible to change the number of partitions, for example; more partitions makes for a faster filing system but need more memory and vice versa.

And once many files have been created, deleted, moved around and generally messed about with, the distribution of data on the disc can become widely scattered. This process, called fragmentation, can really slow down loads and saves and can best be cured by copying all the files on to floppy, reformatting the hard disc and then copying everything back again.



FORMATTING, repartitioning and clearing sections of the disc is taken care of by the SupraFormat program. This is an initially intimidating utility, presenting on one screen all the information about the type of drive, number and size of partitions. The major operations are explained – with suitable frighteners attached – in the manual, but much isn't. This includes SCSI changes...

The Small Computer Standard Interface is, by now, quite an elderly standard. It was originally intended to let any micro use any mass storage device, and also to enable storage devices to talk directly to each other without tying up the main micro.

So it is – in theory – possible to go out and buy a tape streamer (a device using tape to store a lot of data, useful for making security backups of hard discs) which is not designed for use with the Amiga and just plug it into the socket in the back of the SupraDrive.

The trouble with SCSI is that different manufacturers have tended to use different interpretations of the published standard – much like RS232 – so it's always advisable to check the combination of bits before committing to the purchase. But it's nice to know that it's there.

IS the SupraDrive worth the money? On the one hand, 700 smackeroonies is an awful lot of money when a similar sum will buy a 30 megabyte drive with attached computer and monitor in the IBM PC world. Let's face it £700 is an awful lot no matter what. But if any sort of serious work – the sort that will produce enough money to pay for the thing – is envisaged, then there really isn't much choice.

Why does it cost so much? That, as they say, is a good question. Perhaps in the next year or so there will be enough competition to bring the price earthwards slightly. Perhaps.

Meanwhile, it's up to you whether you can justify the expense. I've tried hard and failed, and anyway I've got to the age where Santa just brings me socks. But if you can, do. You won't regret it.

REPORT CARD

Supra 30meg Hard disc
Frontier Software
£699.95

USEFULNESS
It is a dream machine which transforms using the Amiga.

EASE OF USE
You need to understand a lot about AmigaDos to get the Supra disc drive working.

SOFTWARE
Works with the fast filing system, albeit with some help from Frontier.

SPEED
Speeds program loading and makes large packages a joy to use, especially with FFS.

VALUE
Expensive. Compared to IBM drives this is exorbitant.

OVERALL *87%*

I want one, and would buy this without hesitation if I could afford it. But £800 is OTT.



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Scribble! (Brown Waugh) – Amiga	£85.00
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BBS-PC! (Brown Waugh) – Amiga	£85.00
Publisher 1000 (Brown Waugh) – Amiga	£160.00
Music Studio (Activision) – Amiga	£29.00
Latice C (Metacomco) – Amiga	£230.00
Latice C Proff (Metcomco) – Amiga	£230.00
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Amiga Arcade

CYBERNOID

SPACE pirates have been pillaging the Federation's storage depot and made off with assorted jewels, minerals, ammunition and the very latest fashions in battle weaponry.

It is your task to take a Cybernoid battlecruiser to get the pirates with their plunder. All recovered treasure within a level must be returned to the depot.

Fail to return the booty within the allotted time and you'll lose one of your six ships. The faster you complete the task, the higher your score – and you'll gain an extra ship.

Cybernoid originally appeared on 8 bit micros and was designed by Raffaele Cecco, author of several earlier and successful games. This conversion for the Amiga has been expertly handled by Tony Cooper.

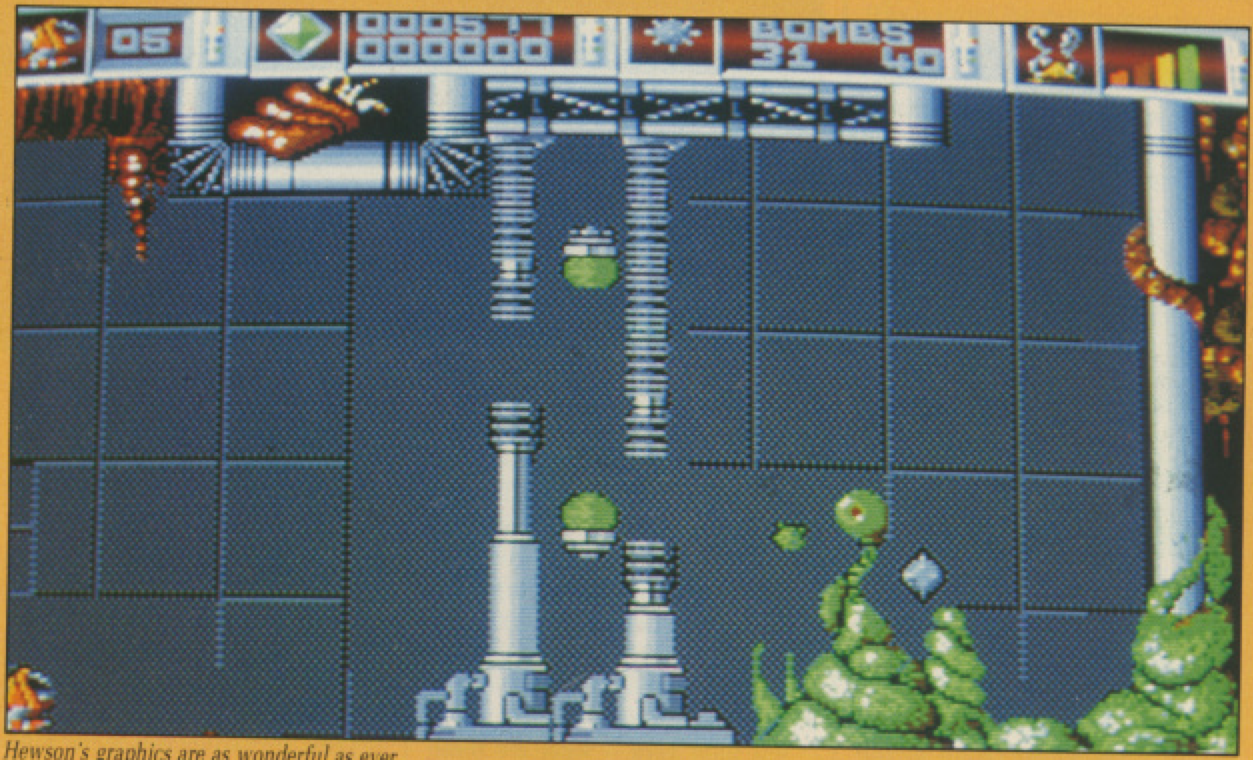
The game opens with an attractive title screen and a strong theme tune, courtesy of Gary Knight. There are few options. Well, there's only one, actually – sound effects on or sound effects off. The game is joystick driven and single player only.

There is an opening feature which I have never seen before. Holding down both mouse buttons while on the credits screen and moving the mouse up or down allows you to position the picture vertically. Saves messing around with your vertical adjustment controls.

Your Cybernoid craft begins its mission in the first chamber of the pirate stronghold. The small, chubby ship moves swiftly and responsively to the joystick. It needs to. Alien craft and a host of defence mechanisms are out to destroy you.

A display panel at the top of the screen shows the number of Cybernoids remaining, score, value of cargo recovered on the level, the current weapon mode, quantity possessed and maximum allowable, with remaining time available shown as a bar chart

As well as firing forward, the Cybernoid has additional attack capabilities. Weapon modes are changed by pressing function keys. These give you bombs (for wiping out large defence emplacements), impact mines (seed them strategically so that pirates smack into them), defence shields (giving short-term invincibility), bouncing bombs (blue blobs à la Arkanoid) and seekers (homing missiles).



Hewson's graphics are as wonderful as ever

While this range of weaponry does at least give you a reasonable chance of survival against the opposition, it is no easy matter keeping one eye on the screen while trying to pick out the desired key. Fumbling for or stabbing at the top row of your Amiga keyboard is bound to be the order of the day.

When an enemy craft is destroyed it sheds its booty. Flying over the treasure gathers it into your hold. Occasionally a destroyed ship will drop a yellow canister, and this increments the quantity of your currently selected weapon.

Some dropped objects will alter the external characteristics of your Cybernoid, a vital element for the more difficult screens.

I found it a little too tough to play. Timing and speed is all, and if, like me, you haven't got either of those in spades, you might well find this game to be the cause of a lot of carpet biting. But then many players like their challenges to come hard.

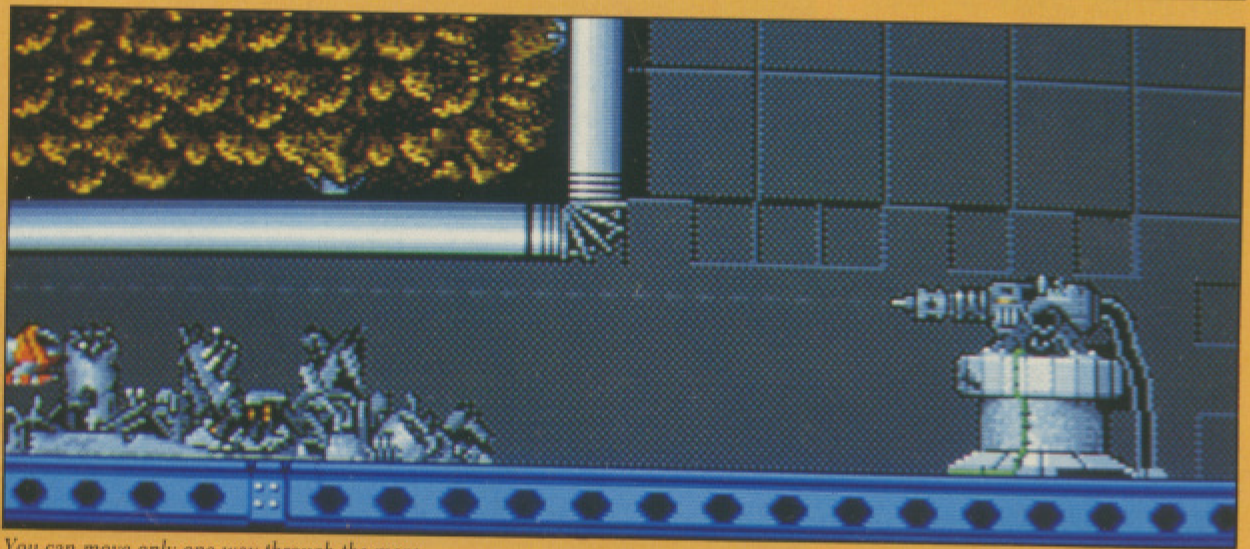
Cybernoid is great to look at. Colourful and imaginative graphics with smooth animation make it a real treat. One disappointment is that there's no continuous scrolling, vertical or horizontal – when you reach an exit, the screen flicks to the new location. Aurally, too, the game is pretty good – nothing amazing but plenty of appropriate spot effects. While it breaks no new ground, Cybernoid is very handsomely presented with quite superior graphical effects. So give it a whirl.

Bob Chappell

Cybernoid
£19.95
Hewson

Sound
Graphics
Gameplay
Value

Overall – 75%


You can move only one way through the maze

TRACKER

ONE of the things that was supposed to happen when we all got Amigas was the concept game. Freed from the memory and graphic limitations of those steam-powered 8 bitters, complete worlds were planned to unfurl under the mice of a new generation.

But still the shadow of the Spectrum hangs over many an Amiga megagame – it's the same stuff in new clothes. Slartibardfast, where are you now?

Perhaps Tracker will help change things. Tracker is, well, Tracker is a lot of things. It's a bit of a maze game, a bit of a shoot 'em up and a lot of strategy. And it doesn't have a loading screen (oh yes it does – but only after the 'type word 534 from the manual' software protection). Can it be taken seriously?

The scenario for Tracker is a typically Rainbirdian far future. You the contestant (xenobiology unknown) have to pilot six skimmers around a huge maze complex (isn't that what Kellogg's analyst found?) with the ultimate intention of blowing up the Centrepoint.

This is (surprise) found at the centre of the hexagonal helices that compose the maze, and is (surprise) the most impregnably guarded place on the planet. You will undoubtedly die.

However, should you disregard that last bit, the mode of getting to Centrepoint is uncomplicated. The maze is made out of trackways connected by nodes. You can turn around and change direction at nodes only.

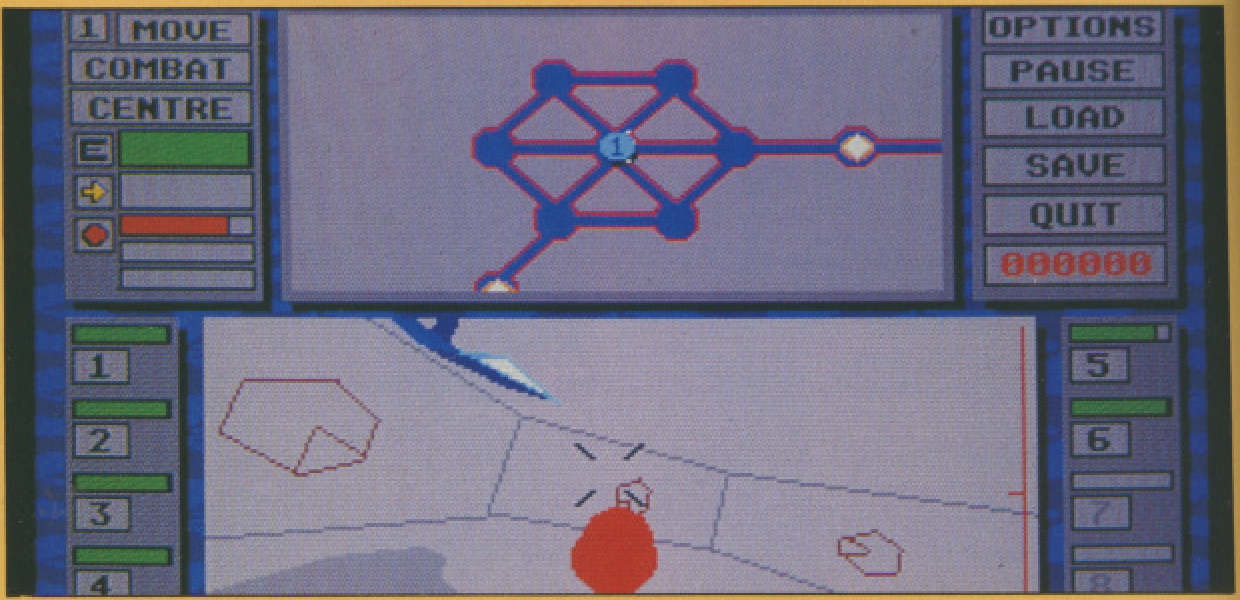
As you fly around the maze, you will come across various thingies, and, if you don't, be assured that they will come across you.

The most interesting and least personally dissipating are the Communications Centres. There are six, one for each of the six peripheral areas of the maze grouped around the central convolute, and each houses a Neutron Bomb. You'll need a few of these if you want to deconstruct the Centrepoint.

Unfortunately, the Centres are impregnable to your only weapon, Plasma Balls. But Communications Links aren't, and hold Quark Bombs. Centres can be destroyed by Quark Bombs. Ah-ha.

There are many more Communications Links than Centres, so the first thing to do is to flit around the maze bombing (or should that be balling? No, it shouldn't) Links and picking up the debris.

To help, two scanners are visible on the control screen. The short-range one shows the current skimmer and the very nearest nodes. The long-range one can show either the complete maze, or can be zoomed in as much as seems necessary to show more detail of the surroundings.



Wire frame may be passé, but it's fast

Each node containing a Link or a Centre is clearly marked on the scanners. Just fly around from one to t'other, and the game is yours.

But hold hard – what are these other blobs on the map, the ones converging on your skimmer? They are the Cycloids. And you are a rapidly expanding cloud of bits, none bigger than a lizard's toenail.

Cycloids are the guardians of the Centrepoint. They fly around the maze in no particular hurry until you succeed in hitting something. Then they start to take an interest in your personal problems. The better you get at the game, the greater their interest and your problems.

There are two sorts of these automated agony aunts (guess who gets the agony, dearest coz), the Scout – common, and not so heavily shielded – and the Defender, single-minded and quite a threat.

As you knock out communications in an area, Centrepoint can no longer control the defence force and it becomes safe. If you don't, new ships can be made to replace those you have zapped.

There are two screens in the game – the map and general game control screen and the combat display. In this one, selectable from the main controls, you're shown the view from the front of your skimmer; the mouse controls flight as per usual and the enemy hardware pops up in the traditional manner.

But for most of the inter-fight flying, it's best to leave the game in the control screen where the antics of all six of the skimmers can be observed and manipulated.

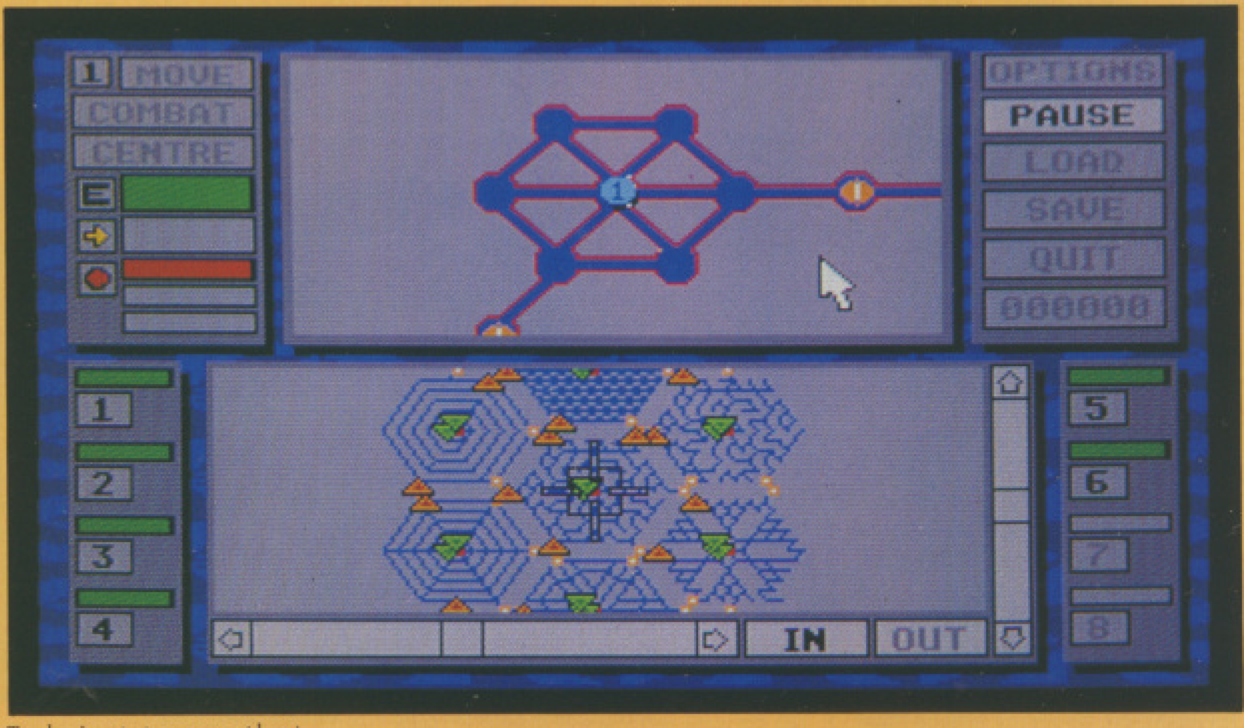
There's a lot in Tracker, and it will last any strategy-minded gamer weeks, at least. But that's its strongest point; the graphics and sound seem straight ports from the ST and they weren't wonderful there. I could find no use made of the Amiga's special hardware, even the mouse pointer seems to be entirely software generated (it flickered and vanished from time to time). But for those who like some thought in their mindless mayhem Tracker has a lot to offer.

Rupert Goodwins

Tracker
£24.95
Rainbird

Sound
Graphics
Gameplay
Value

Overall – 72%



Tracker is a strategy game at heart

WHO FRAMED ROGER RABBIT

THE No 1 film this Christmas is making a bid to be the top selling game in the New Year. Who Framed Roger Rabbit, the movie, uses traditional and computer effects to produce an amazing film.

If you haven't seen it you should. And it might be best to stop reading this review because it will give away some of the plot.

Toontown is the home of all the cartoon characters. Many of them work at the studio of R. K. Maroon



All is not well in Toontown

(played by Alan Tilvern in the film) in the real world, popping home to Toontown at night.

The good thing about being a Toon is that nothing can hurt you, having a fridge dropped on your head is all in a day's work for Roger Rabbit (Charles Fleicher).

Unfortunately Judge Doom (Christopher Lloyd) has plans to level Toontown and turn it into an exit for a new freeway.

To further this aim the judge has developed a fluid called "the dip"



Would you take orders from a baby?

which will erase Toons, and so must be handled with rubber gloves. He can't touch the town because it belongs to Marvin Acme (Stubby Kaye).

But Marvin has been playing Pat-a-cake with Roger's wife, so when he gets killed R. Rabbit is the prime suspect. The judge wants to dip Roger for killing Marvin and then dip the whole of Toontown to make way for the freeway.

The Toons have only one hope. They must find Marvin's will and get it to the gag factory before midnight and crush Judge Doom's claim to the land. Marvin was a bit of a joker (watch out for the hand buzzer – gets 'em every time), and has written his will in disappearing, reappearing ink.

In the game you play Roger. You have to drive to the club where Marvin left his will, pick up all the napkins and bits of paper and then drive to the gag factory.

The car, Benny the Cab (Charles Fleicher), is a Toon and so must avoid the puddles of dip on the road, either by driving over the buildings or by leaping the puddles. If you touch the dip you collect a barrel of the stuff and are shown a map which lets you see how close you are to your destination.

Collect five barrels and the game is over, Toontown is lost and you have to re-boot. Pretty naff, eh?

By raising Benny's suspension you can pick up tires (sic), diamonds and gloves to help you on your way. The tires (still sic) make Benny drive faster, which will give you more time at the club. The gloves protect Benny from the dip and the diamond decrements the barrel count – effectively an extra life.

All this is set to a brilliant arpeggio tune in keeping with the 1947 period for the film. You have to dodge other cars; the brilliantly animated crashes are not fatal but slow you down.

When you reach the club you have to run around the tables and pick up the papers. If Roger touches a whisky he will go crazy, but the worst hazard is a gorilla which will throw Roger out of the club.

From there it is back to the road and on to the gag factory to do battle with the evil judge.

In the factory you have to pick up and use the tricks lying around. The game comes with a pamphlet which describes the different gadgets in a cute 1947 way. It also serves to protect the game.

At intervals you are asked a question about one of the gags. If you get it wrong the game resets. This means that the discs can be copied to a hard drive – a recommended procedure since there is a lot of disc access, which slows the game.

The film has 390 people in the credit list, the game apes this with a who's who in the Amiga world. The program was written by Eric Daniels and Reichart Von Wolfshield of Silent Software.

The ever so cute graphics are by



Pick up the papers

top notch Amiga artist Sachs and there are credits to Ben Fuller – famous for project D – Heidi Turnipseed – famous for the Photon Paint manual – and Leo Schwarb – famous for being Leo Schwarb – along with a long list of other notables and nobodies.

But is it a good game? Well it is pretty and the music is great. It carries off the film link better than any game since Ghostbusters. Filling two discs is an achievement. I'm



Roger can't accept failure

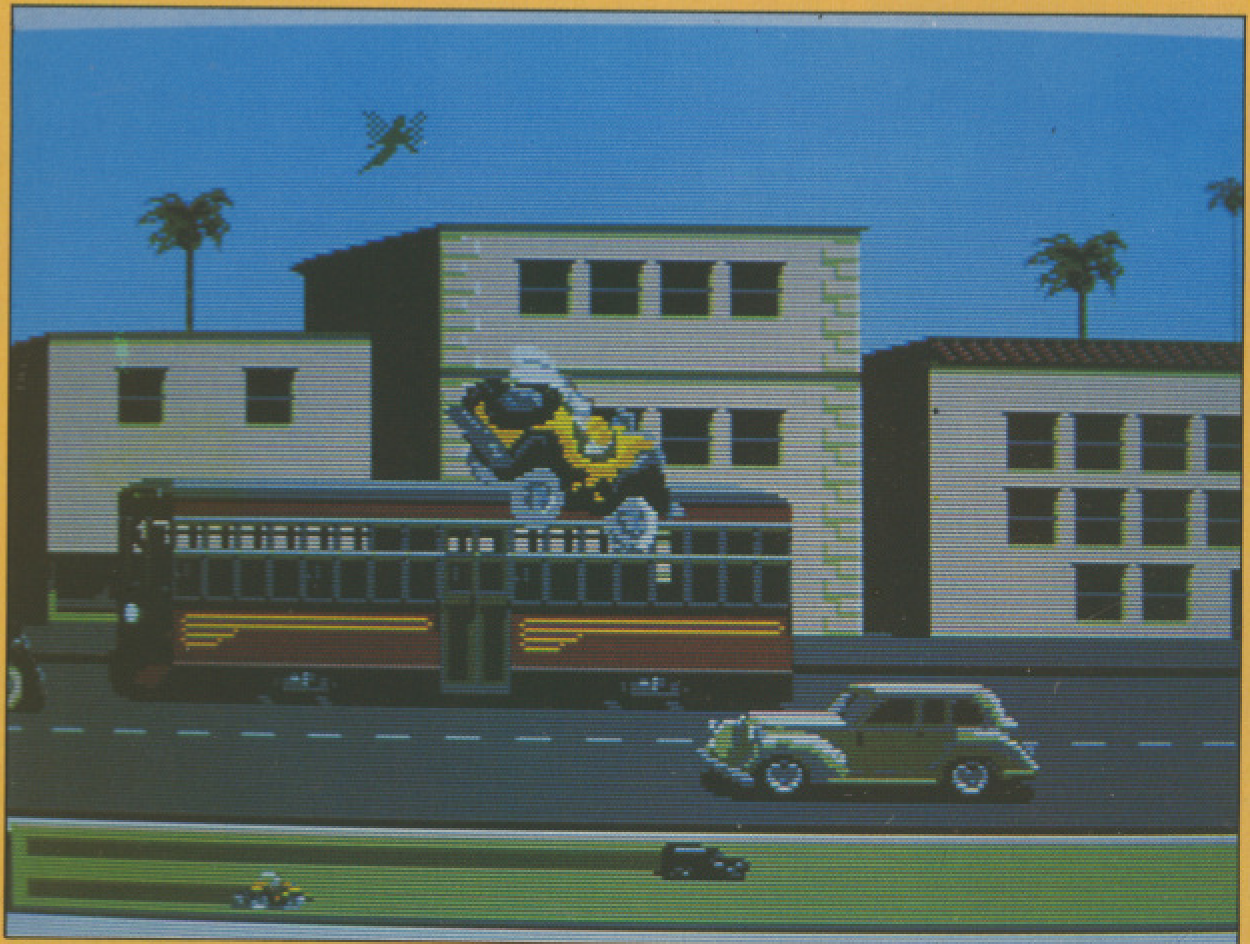
hooked but I suspect that part of this is a love for the film and when that wears off so will the appeal of the game. Best described as out-Cinemawarring Cinemaware.

Simon Rockman

Who Framed Roger Rabbit
£TBA
Buena Vista/Activision

Sound
Graphics
Gameplay
Value

Overall – 82%



Your cartoon cab has a big mouth and interesting suspension

THUNDER BLADE



The buildings loom impressively

FOLLOWING the hugely successful, Afterburner, Sega produced their own version of helicopter mayhem – Thunder Blade. The object of the game is simple – shoot everything in sight.

In fact the two games are similar in many respects, both using very expensive hardware to produce multi-coloured sprites which give the impression of explosions jumping out of the screen at you.

Whichever you play, the seat-of-the-pants feeling you get is remarkable, with or without the hydraulic rams supplied on some versions.

This poses a problem. How do you simulate an arcade game which uses custom-designed sprite hardware and stereo sound on a meagre home computer? Simple, you find a machine capable of such mind-boggling feats, an Amiga for instance, and program it in machine code. This is precisely what the team at Tiertex has done. It is astounding.

As per the original, the game is split into four stages of three waves each, the finale of each being the dreadnought – an emplacement of such vast capacity it seems to go on for miles.

The first scene of each wave is viewed from above the helicopter. But don't get the idea this is another boring vertical scroller – it most certainly is not.

The second wave puts you directly behind the chopper in glorious 3D, and the third reverts to overhead perspective.

The scene is set in a war torn city which tanks and artillery have infiltrated. You and Thunder Blade are the only things standing in their way. Pulling back on the joystick makes the chopper rise, pushing forward descends.

To move forward you hold the fire button down and push the stick forward. This feels a little odd at first but you soon get used to it. Holding the fire button down soon becomes second nature, as this is the only way to keep up the devilish rate of fire required to dispatch the enemy.

As for the bad guys, they don't give you much of a chance – even in the early stages the homing missiles explode like hotels in Beirut. Get caught in the explosion and it's curtains.

Dodging missiles seems to be the only escape, but stray too far toward the edge of the screen and you crash into the skyscrapers.

In the second wave the view is from behind the chopper. This helps you avoid enemy fire by flying over the tops of some buildings. The end of the first stage is marked by a gigantic aircraft carrier that literally bristles with death. Then things start to really hot up.

Stage two takes place in a canyon and then on through a brushwood forest towards a desert where you meet a moving munitions dump. By this time the enemy has wised up to your antics and launched an air attack to keep to busy.

Later stages see the addition of bridges and strange rock formations. Even the wave endings become more bizarre – the penultimate one being a gigantic jet aircraft.

Finally you arrive at what I assume is the enemy's own city and headquarters. The opposition became too tough even for me with my highly trained reviewer's reflexes.

If you've ever played Thunder Blade in the arcades, this conversion is a faithful and exciting reminder. Graphically speaking, it lacks much of the subtle detail of the original while retaining the main structure, although there's so much going on this is hardly noticeable.

Ultimately, I have a niggling doubt about the game as a stand alone title. Without doubt it is challenging enough to keep arcade addicts happy for hours and its overall quality could never be held at issue. Whatever criticism you could raise, would also be true of the original, and in the end Thunder Blade is explosive fun, albeit shallow.

Phil Lawson

Thunder Blade
£19.95
US Gold

Sound
Graphics
Gameplay
Value

Overall – 83%



Bomb the moving boat

SORCERY PLUS

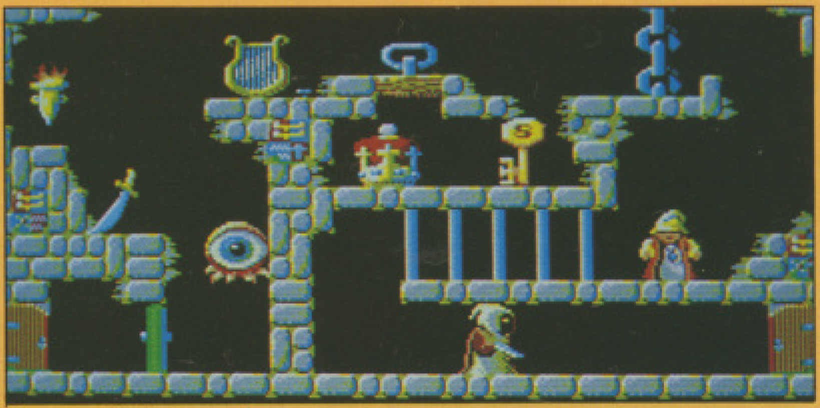
SORCERY plus is a a souped-up version of an old, but in its time very popular, game. The original Sorcery was written for 8 bit machines, and I'm afraid it shows.

In both sound and graphics, Sorcery Plus is really quite effective but it is a different story where gameplay and depth are concerned. There simply isn't enough variety or meat in it.

The game is set in the Dark Ages where, as usual, a nasty necromancer is causing havoc, having trapped all the sorcerers of the land and loosed various horrors to do their worst. As a small fellow wizard, it is your job to clear the kingdom of this blight and blighter.

The action is divided into two parts. In the first, you must free all the imprisoned sorcerers, while the second, an additional scenario to the original 8 bit game, involves you in a seek and destroy mission, the necromancer being the main target.

The game is basically a puzzle-cum-collect-'em arcade adventure. Your sorcerer gets to fly around a large number of two-dimensional screens, entrance to each of which is gained by passing through one of the small doors placed (usually) in the corners.



The gang of five's greatest hour

To open a locked door, you need to pick up one of the keys scattered around the place. Certain keys can be used to release the captives. There is a large assortment of weapons, each of which can only be used once. Your sorcerer can carry but one object at a time – grabbing a fresh one causes the current item to be dropped.

The main interest lies in discovering which objects do what, and because of this trial and error element you'll spend a lot of time flying backwards and forwards between locations.

To make things more difficult, a host of bizarre monsters infests the land; contact with any of them drains your energy. Weapons are the solution to this harassment. Water is another hazard – you can fall in and drown – and a time limit on the game means you can't dawdle.

Graphically the game is attractive, although the animation is pretty basic, and sampled spot sound effects – thunder crashes, creaking doors and satisfied sighs – liven up the fun. However, although there are plenty of screens, objects and puzzles, the gameplay is all much of a muchness – collect and fly, fly and collect – and soon becomes less than engrossing.

The chances are that, despite its good points, you'll either solve Sorcery Plus quickly or tire of it within a fortnight. This is a good game but not good enough in today's company.

Bob Chappell

Sorcery Plus
£19.95
Virgin Games

Sound
Graphics
Gameplay
Value

Overall – 52%

AROUND THE WORLD IN 80 DAYS

FROM the people who made far too good a job of Katakis for it to have escaped the eagle eye of Activision's lawyers, comes a tale of derring do and adventure from around the globe.

A tale first scripted by Jules Verne of course, as the game is Around The World in 80 Days. The good news for Rainbow Arts and Interceptor, who is marketing it here, is that I doubt if anyone's lawyers will be raising an eyebrow in its direction, Mr Verne having popped his cloggs longer than 50 years ago.

It all starts in the Reform Club in London naturally with our Phileas Fogg boasting that he can traverse the world in 80 days, and that without a Young Persons railcard. And so the crusty nobs of the Reform Club force him to bet all he owns, amounting to a tidy £20,000 – which never mind buying you a cottage in Wales, would have bought you Wales itself in those days – to prove his claim.

On October 2 Mr Fogg and his faithful (that is to say, stupid) butler, Passepartout set off on the great adventure. First stop, Paris! One of the strange things about this game is the way you have to split yourself schizophrenically, between Fogg and Passepartout. Half the time you play the lackey, and the other half the loony Englishman.

Anyway, the game kicks off with a small dot travelling across a world map, a puffing train in the corner to indicate speed of travel, a moneybag to indicate finances, and an option to bribe or play cards.

This is where Phil and his lackey spend half their time, as the game goes off to individual adventures as and when their locations are reached, before returning to the map once more.

The bribe option speeds up your rate of travel, depending on how much dosh you want to spend. What I found rather witless was the cards option in which you can resupply the campaign moneybag if you get lucky.

The point is that you don't need to get very lucky at all because either Phileas cheats, or the dealer is a personal friend, because they come up in certain patterns. Recognise the patterns and you can make a lot of money quickly.

Anyway, the first adventure that our lads find themselves embroiled in has Passepartout running through India in search of? What? A takeaway? Dunno really.

The bottom line is that this is arcade action time, with said butler trotting through the jungle and then a temple while people drop things on him, or throw spears, or he falls into pits. Fail to make the exit in time and the adventure is over.



Playing cards gives an easy source of finance

It isn't too hard, and the graphics are quite decent, but the scrolling is a joke. We're talking routines rejected by Psygnosis here.

Next stop is Japan and catching acrobats on your shoulders, which is difficult to say the least. Should you survive that, dodging wolves in America comes next with a quite silly section in which you must copy an Indian medicine man's dance if Fogg isn't to become an Indian eat-at-home.

Still, an eccentric Englishman's lot is not an easy one. So, after an enjoyable sledge ride it's on to good old Blighty, just in time to get incarcerated in the dungeons of London. Can you escape in time? Do you care?

Although the graphics are quite good, Around the World In 80 Days is just a little repetitive, forcing you to play the same bland sub-games each time you fail. At times it seemed like I'd been playing for 80 days, and I hadn't even got further than the kitchen for a cuppa.

Mark Luckham

Around the World in 80 Days
£19.99
Interceptor

Sound
Graphics
Gameplay
Value

Overall – 60%

HYBRIS

REALLY good shoot 'em ups are something of a rarity on the Amiga. Sure, there's Xenon and Zynaps and a few others, but when you consider the range of games of this type that exists for the 8 bit computers, it seems extraordinary that this situation has developed.

Maybe it's because programmers are busy trying to come up with new game concepts to match the Amiga's strengths – but even so, there are few games quite as enjoyable as those that involve wasting row after row of aliens.

The good news is that things are about to change, at least three powerful Amiga shoot 'em ups are poised for imminent release – Activision's R-Type, Phantom Fighter from Martech and Discovery's Hybris. Of the three, Hybris is probably the least impressive looking, but it only takes a few plays before it becomes apparent that this first impression is far from accurate.

The action is typical of the top to bottom scrolling type. The player flies in all four directions shooting wave after wave of advancing aliens and ground installations. Extra weapons are available along the way by collecting icons which appear from time to time.

Pretty normal so far, eh? There are however a couple of points which enhance the playability far above most of the competition. The first of these is the weapon enhancement feature: Collect any weapon, waggle the joystick (without holding down the fire button) and the weapon immediately assumes new destructive powers.

Although this only lasts for a short time, three enhancements are allowed per weapon, which is just enough to keep things going until the next comes along.

Another point in Hybris' favour is that the playability is perfect – the going is tough but not frustrating, and the extra weapons and smart bombs should enable even the least coordinated player to get further along this landscape than they normally would.

And even those who fail miserably to get past the first screen needn't worry, as an arcade style "continue play" feature should see them just as far into the proceedings as they want to go.

The music and sound effects also deserve a mention – the in-game soundtrack is especially impressive, sounding something like a cross between Bronski Beat and Bon Jovi. The graphics are a little ordinary, but they're exactly the right size, small enough to allow plenty of room to manoeuvre yet still big enough to be distinct.

Of all the game's good points the best by far is the customise game option which allows you to set most of the game's parameters. The number and regularity of the enemy's bombs can be changed, as can the frequency and duration of the expansion systems.

Hybris doesn't only shine because of the dearth of this type of game. It's also the best shoot 'em up of any type that I've seen in ages – and that includes countless coin-ops.

One last thing. If you do decide to have a crack at Hybris, make sure that you've got a good strong joystick and a couple of hours to spare.

Ciaran Brennan

Hybris
£19.95
Discovery

Sound
Graphics
Gameplay
Value

Overall – 91%



Awesome firepower

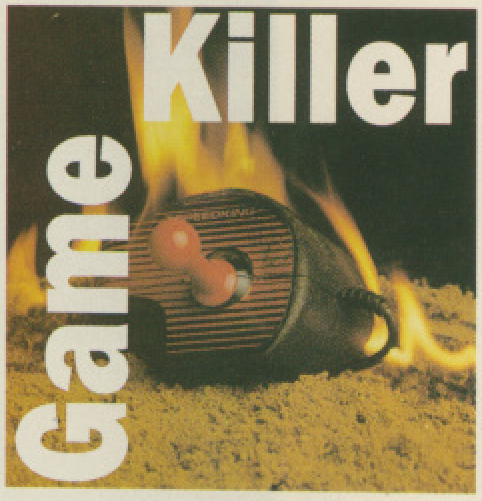


Slick scrolling – great playability

Max Tennant's winning streak

HEY, you have been a busy lot. The postbag this month had a bumper bundle of handy hints for gamelords. It may take a time to send out joysticks and games to the wonderful winners because I've exhausted my supply. A new lot is due in soon and should hit the mat at your place for crimbo.

The first tricky tipster is C.J. West from Holt in Norfolk with a wide cross section of gamey advice. In Ferrari Formula One, count to two after the green lights come on, he

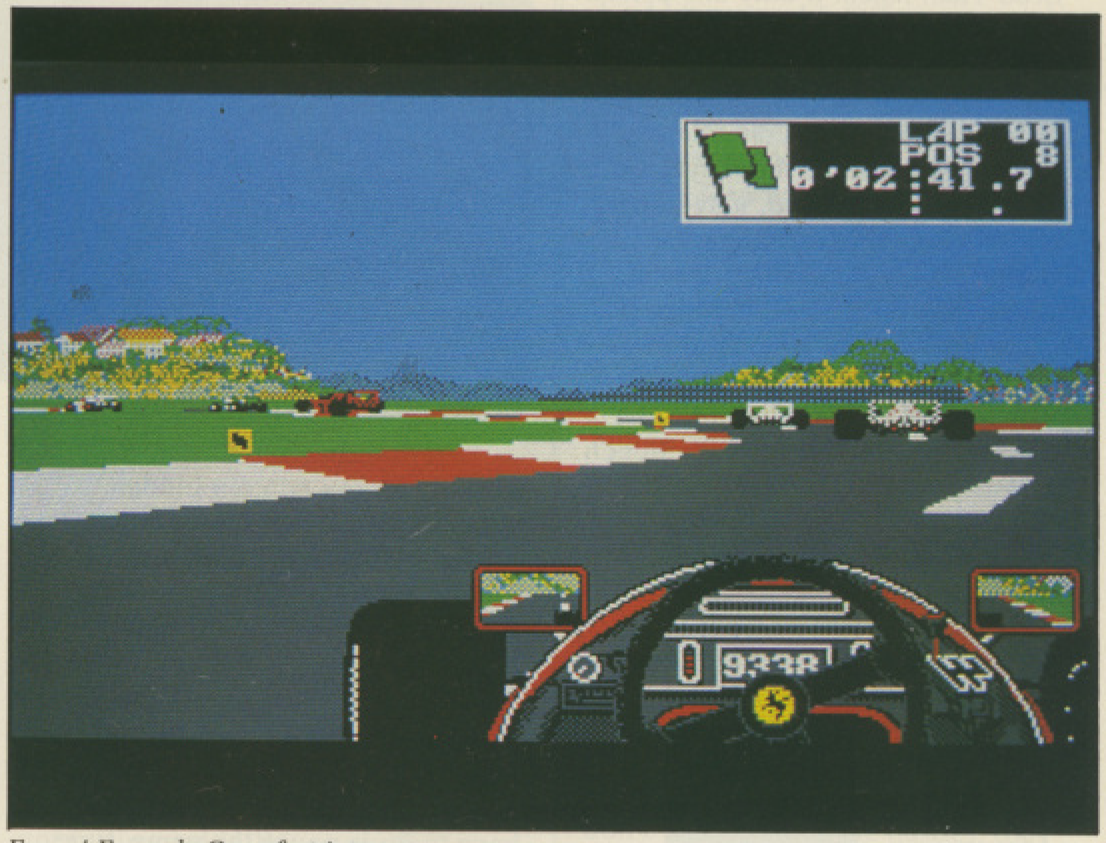


advises, then press the accelerator and keep it pressed.

Keep the car in a straight line and your turbo boost will kick in so you'll find yourself moving rapidly up through the pack. Don't be too keen though, because a sharp corner is never far away.

Too late to give that advice to Nigel Mansel though, he joins Ferrari just as turbos get banned. Good thing too. Where was I? Oh yes CJ was about to give some advice on Bone Cruncher. Password entry to different screens. Try these: Gole Killer, Golemstench, Morphicle, Scarab, Web of Death, Underground, Hornslut. Oh and always make Soap whenever possible.

Nice one CeeJ, I like your Bionic Commandos tip of throwing the hook



Ferrari Formula One...fast into corners



Bionic Commandos...swing that hook

◀

to scroll the screen and reveal platforms or defences. This is frequently handy in making progress.

But it is back to the track for the best advice. In Enduro Racer, type the word CHEAT after the countdown, then press the letter T if you want an extra 10 seconds, press S to advance to Level One or Press F for turbo speed (210 Kmh).

JAMES Thomson from Glasgow has some totally halibut tips for Better Dead Than Alien. If only one person is playing, both sets of control keys may be changed to the same to give one player control of both spaceships. But if you really wanna cheat use these control codes: Elektra, syzygy, drambuie, plug, soprano, mayonnaise, faucet, potato, wookie, narcissus, debutante, firkin, acoustic, triptych, jabberwocky, whimsical, cornucopia, punjabi, tiddly pom, kewpie doll, sepulchre, euphemism, grammarian, crossword and quarantine

His last tip is for Sentinel – a bunch of landscape codes, shown below.

Landscape	Code
7	84257688
8	16257084
15	64046644
16	66974534
20	13509961
43	84199553
44	96088666
58	46574972
61	26060764
73	77809996
82	45949644
95	48883305

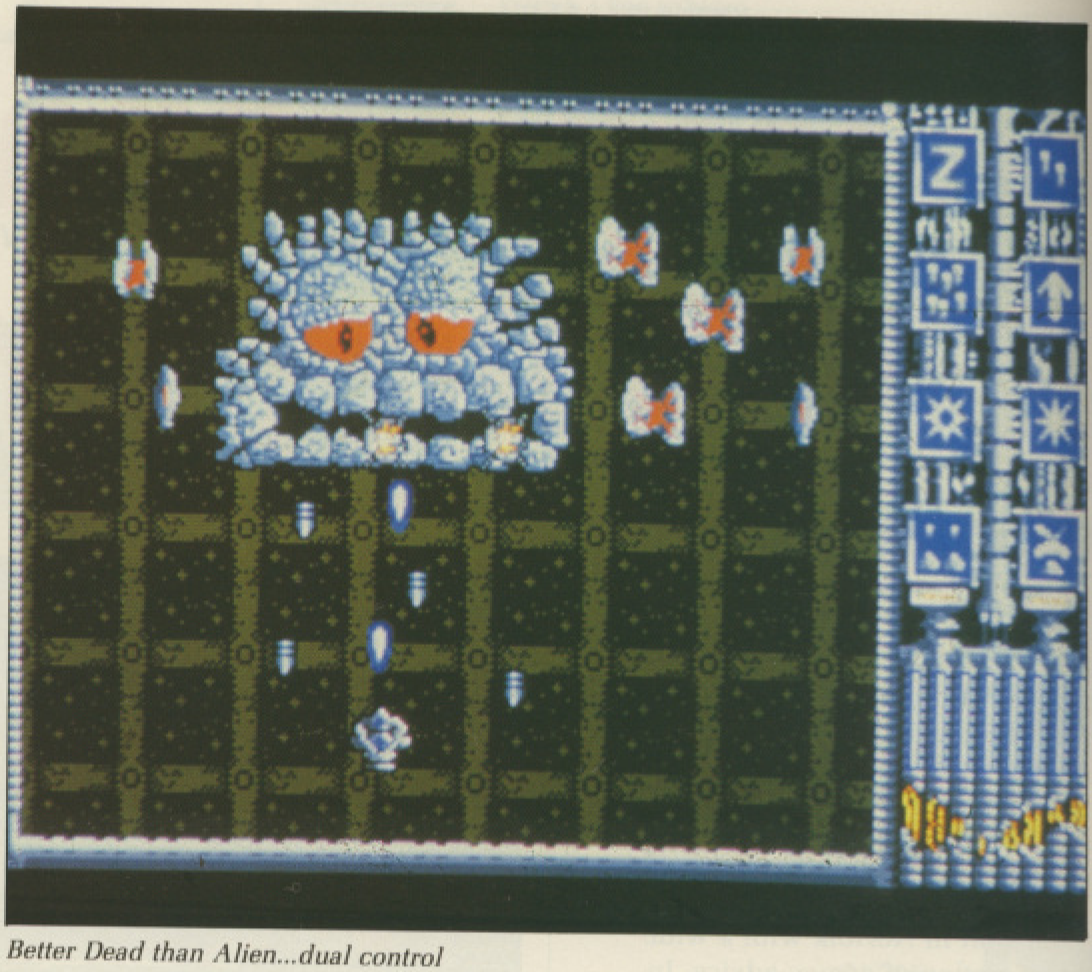
James' Sentinel codes

Andrew Davidson's hint is for Menace. At any time during the game, type XR3ITURBONUTTERBASTARD to enter the cheat mode. Once the cheat mode is operative you will receive all the weapons and outriders.

However, the energy levels for the lasers and cannons can still decrease. To go straight to the end-of-level guardian, press Return and to access the different levels press the relevant number on the numeric pad.

The Great Giana Sisters may have been banned, but not before John Burrows from Burnham-On-Crouch in Essex got his mitts on a copy. He's drawn up a this list of hints:

- All pits which contain a blue line at the bottom lead to bonus screens. Be careful when jumping out!
- On some levels you are able to break through the uppermost level of bricks. Do this and jump through for easy access to the end of the level.



Better Dead than Alien...dual control

- Many blocks contain hidden bonuses. Always headbutt these several times, as many of them contain several bonuses.
- Both dragons and spiders die if shot repeatedly. Do unto them before they get a chance to do unto you

THOMAS McDermott has a pretty good cheat for Wizball. All you have to do is pause the game, type RAINBOW and continue to play. The next time you pause the game enter C and you will automatically fill the paint pot for that level.

I'm a Faery. My name is Nuff. Faery Nuff. Dave Walker has sent in the short basic program below to allow the player in Faery Tale adventure to start the game with the maximum number of totems, which makes gameplay considerably easier without spoiling it.

```
REM prog to give maximum totems
REM DAVE WALKER 29/08/88
OPEN "i" ,#1,"df0:a.faery"
OPEN "df0:temp" FOR OUTPUT AS #2
LET n=1
start:
WHILE NOT EOF (1)
LET x$=(INPUT$(1,#1))
I^YF n<>168 THEN PRINT #2,x$; ELSE
 PRINT #2,RIGHT$(MKI$(255),1);
LET N=N+1
GOTO start
WEND
CLOSE #1
CLOSE #2
KILL "a.faery"
NAME "temp" AS "a.faery"
END
```

Dave's Faery Tale listing



To use this cheat, first make a copy of the extras disc then type in and save the basic program. Give it any name; I called it TOTEMS.

Then load up Faery Tale and immediately save the game as A^Y on to the copy of the extras disc. Finally load up the basic program and run it. Load Faery Tale once again, and use the saved game A from our copy of extras disc. Julian has a near infinite (255) supply of totems, enough to do plenty of mapping.

I don't wish to spoil the game, but should you wish to begin with a supply of keys as well, modify the program to alter the output file for the



Sentinel...handy landscape codes



Wizball ...keep that paint pot full

values of n as follows: 171 for yellow, 172 for green, 173 for blue, 174 for red, 175 for grey and 176 for white keys. Do not exceed the value of 255, which is a maximum – and plenty anyway.

Thanks Dave, you're a hero.

N. BILLING from Strood wrote in and here is his utterly brilliant tip for Peter Beardsley's Football. If you are tired of always getting tackled, run towards the opponent's goal and keep continuously clicking the fire button.

You must keep going a straight line and almost certainly you'll reach the goal without being tackled. The trick is that when you are about to get tackled you kick the ball beyond your opponent and run past him.

A warlike soul is N (please let's have full names; you deserve more than a letter for your letter, if you see what I mean). OK, N. has some tips for Ikari Warriors. We all know it's good fun running up the screen with the auto fire on crying *Die you swines* but that's one good method of how not to succeed in this game. If anything many precautions and great care must be taken.

The wise thing to do is to destroy everything in sight, otherwise a few men will run back up the screen straight at you and cause a few problems.

The explosions caused when throwing grenades could catch you by surprise. If you are close enough to destroy a shelter, you are close enough to get killed by the explosion, unless you have picked up a flashing L by killing a red enemy. This will increase the range of your bullets and grenades.

Other flashing letters include Bs, Ks and Fs. Ks act as smart bombs, killing all men shown on the screen. Bs are rare but very useful as they make the explosions from grenades and tank shells more devastating. When you lose a life, your firepower will return to normal but your grenades and bullets will be replenished. When throwing grenades at certain tanks and shelters, chain reactions can be caused, either to aid or to hinder you.

But it is Andy Van-Kerro of Huntingdon who can really rack up the points on Ikari Warriors. Simply on the high score chart. Great!

He has more tips – to complete each level of Menace first make sure that you have the highest score possible by shooting the bonus blocks as quickly as you can until you are given extra energy.

When you reach the end of a level wait for the meanie to start shooting, then move right on to it and start shooting as fast as you can until it is dead. An extra hint. If you are right handed try holding the joystick with your left hand and shooting with your right. You can shoot much faster and will soon get used to it.

Andy also has a hint for Aaargh. Always make sure that you destroy buildings from the side, he says. This way you can carry on destroying the building by punching it until the gnat is really close, then go for it.

Eat all the food you can – don't bother about eating people, as this wastes time. On the challenge level keep your joystick pressed towards the opposition then keep on pressing fire as quick as possible.

ON the last scene – the volcano – try to get to the top of the screen as quickly as possible and don't worry about the nasties, they won't hurt you that much. I find it a lot easier playing the ogre instead of the stupid looking godzilla.

Thanks everyone, keep your tips coming in, I'm aiming for a bumper column next month. I've had loads of letters about StarGlider II, most of them included tips I've already printed and so won't win the author's fame on these pages or a Konix Speed King.

What you will get though, is a free StarGlider II poster autographed by the team which wrote the game. So if you have sent in SGII tips wait by the letterbox.

Max the Hacks is always on the lookout for help in the joystick jive. If you have any cheats then send them to MTH, Amiga Computing, 78-84 Ongar Road, Brentwood, Essex, CM15 5BG. He will send a game from the goodie drawer and a Konix Speed King Joystick to everyone who sends a letter which gets printed.

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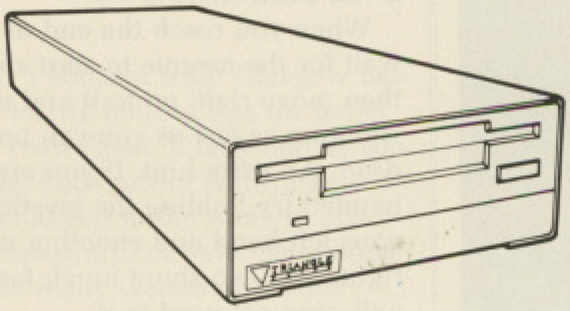
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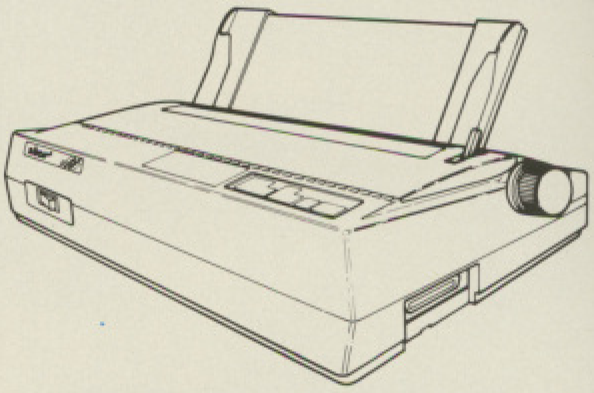


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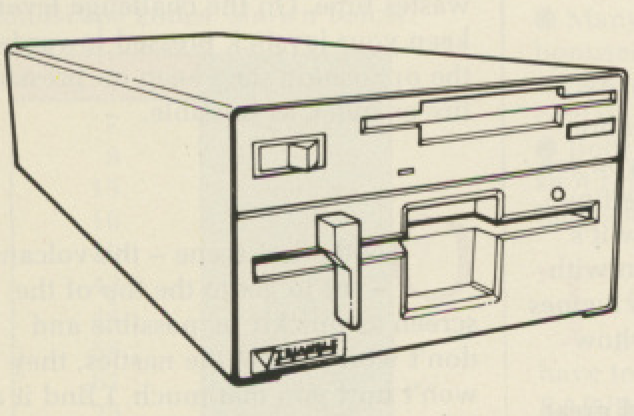
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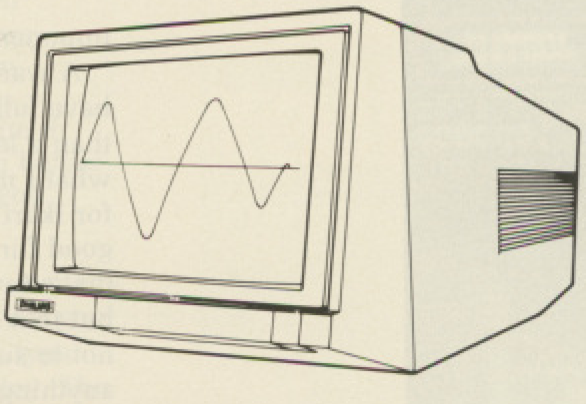


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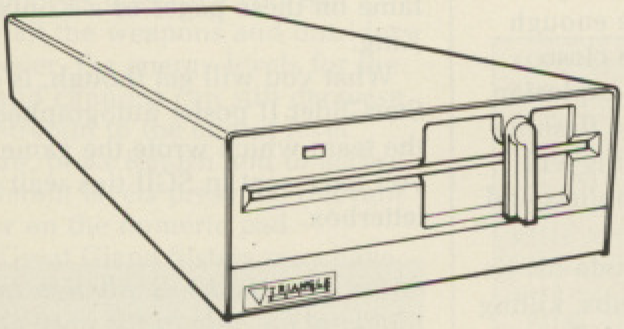
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Rod's vision

John Minson braves builders and tea chests for an audience with the head of Activision UK, Rod Cousens

AMANDA Barry, Activision's head of public relations, doesn't want me to pay a visit. At least not this month. And certainly not with a camera. All of which seems like a mighty strange approach.

But Amanda has a point. Activision has just moved into new premises in Reading and, like anywhere else when a move has just taken place, there is still a sense of living out of boxes. In fact, the company should really have held on a month or two before relocating, but the impossibility of packing everything into vans at the height of the pre-Christmas rush forced a slightly premature transition.

Which is why I find myself on the first floor of a brand new building, the ground floor of which still appears to be under construction. The partitions that will divide everybody's offices have still to arrive, giving the place an air of extreme open plan. The one advantage, according to Amanda, is that you can shout across to your colleagues.

Even the coffee machine is only there for evaluation and I just manage to grab a cup before the engineers reclaim it. But it's easy to see that this new space is going to be attractive and easy to work in. Even a certain royal architecture critic would find it hard to criticise the modern design, with its glass walls which allow us to watch the autumn sun sink slowly... *(Enough of the poetry! – Ed)*

More importantly, the new offices will allow Activision UK to unite its operations in one building. In the past The Software Studio's development division was based in Southampton, resulting in many hours wasted roaring down the motorway from London. Later this year all that will change as everybody moves under one roof, though The Software Studio will retain a sense of independence and privacy by being separated from Activision's office space.

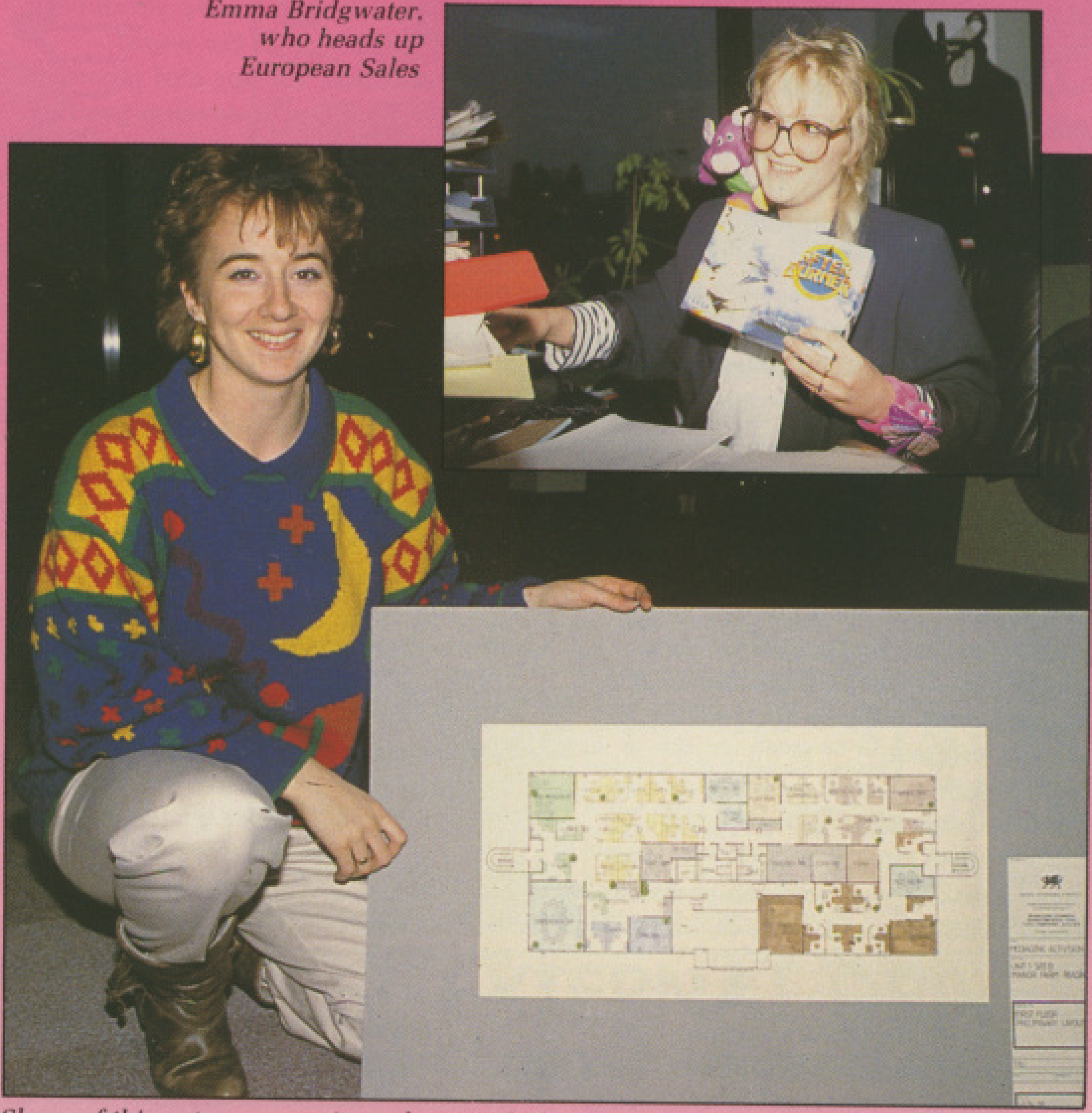
Amanda takes me for a brief tour of the inhabited area. Despite the half-finished feel of the place, everybody is hard at work with their day to day business. Meetings are taking place and phones ring – in particular for Julie Barwick, the newly appointed consumer relations representative.



Rod Cousens ... the industry calls him Rod the God

Call in with an enquiry about an Activision game and you'll find yourself talking to Julie, who says she's already got a number of 'regulars'.

I'm introduced to Martyn Oliver, Activision's production co-ordinator, Mike Segrue, sales manager, Emma Bridgwater, who's in charge of European sales and finally Amanda's assistant, Zia Brooks. Despite the initial reluctance we're all getting along fine – and it's a good thing we didn't put off the interview, as I'm about to find out...



Emma Bridgwater, who heads up European Sales

Shape of things to come ... Amanda Barry holds the master plan for The Software Studio

ROD Cousens' nickname in the computing industry is Rod the God. It fits. Not only is he the high profile head of Activision UK but he also moves in mysterious ways – or at least in a Porsche 911 and a variety of international airlines. I'm lucky to catch him between his return from the States and a brief visit to France and Germany. He makes the return trip across the Atlantic eight to ten times a year.

All of which serves to give Rod the image of a high-flying entertainment mogul, which is also accurate. "It's not engineered that way", he grins. "If you spend most of your waking hours working, which I do, and the job's not just confined to sitting in the office but includes conducting telephone calls with America at two and three in the morning – well, yeah, I like to have some fun".

Rod entered the computer industry with Quicksilva, publisher of some original games during the golden age of the Spectrum. "It was a thrill to build a company up from very modest beginnings and take it to a position of leadership in the market place". That success eventually attracted Argus Press Software, which bought the company. Even today Rod feels great affection for his origins. "There is a certain regret that it is no longer what it once was. I hope that it will return to former glory.

"Following the acquisition, I stayed for a year before leaving to set up Electric Dreams Software. I'd built up various relationships with American companies and one of the individuals I came across at that time, who I now regard as a friend and admire enormously, was a man called Gregory Fischbach, who was then president of Activision International".

Activision's roots lay in video games, which Rod points out is ironic considering the current revival in consoles. Its three founders took the company from zero to a turnover of $158 million and went public.

THE collapse of the cartridge market saw Activision diversifying into home computer software. It was 1985 when Rod took the idea of Electric Dreams to the Americans and they agreed to fund it, and from there it was a short step from turning Rod's constant contact with Activision into an even closer relationship. He became the UK managing director in June 1986 and just over a year ago was made vice president for Europe.

This promotion indicates Activision's close links with the UK. Unlike some American software houses, which were happy to license their product to British publishers or just set up satellite operations over here, Activision was the first US outfit to have a British operation and, thanks to Rod's hard work, has made the most of British programming talent. But it's not always been easy.

"We had to learn along the way. Things like the formats to support and the concept of cassettes. Discs have, until recently, been considered a luxury rather than standard in the UK, which restricts the complexity of games to a single load. Often the British market is seen as relatively young and immature compared with America, and it's an assertion that Rod won't dispute. Some of Activision's early releases seem very "Californian".

There was Zenji, a Zen-based block shifting game which some found impenetrable but which has been successful on budget re-release. Then ▶

◀

there was Little Computer People, which was not really a game but the micro equivalent of Pet Rocks. My favourite Activision experiment is Alter Ego, a psychologically accurate life simulation which judges your reactions to crucial events to create a new biography.

Now deleted, it was ahead of its time, but as the 16 bit users mature Rod indicates that those early programs may well see a new lease of life. "Alter Ego cannot be viewed as a mass market product, and I think it's to our credit that we're prepared to be experimental. But it's premature to write these products off. The market has yet to become meaningful in those areas over here and when it does we can re-promote, re-launch and re-publish.

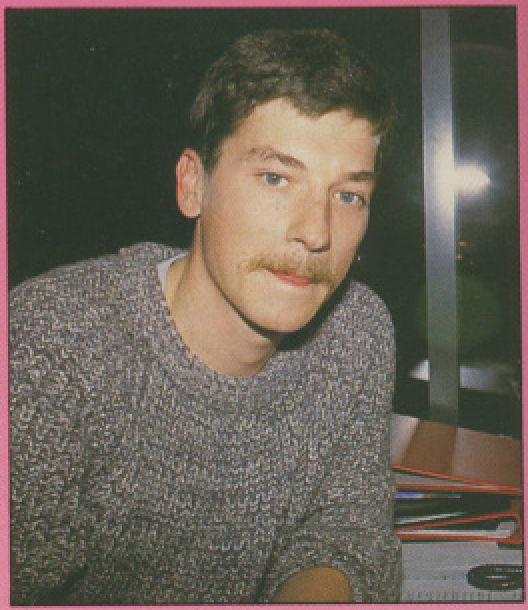
"The commercial reality today is that we enter the market through distribution channels and they have to support products which provide them with a rapid turnover, but as the market matures that will not necessarily be the case. The products will require far greater support and achieve extended shelf life; also the age range that we target is increasing and broadening all the time".

Rod sees Activision's sensitivity to national markets as one of its special strengths. "We can source product in the key territories in the world – North America, Europe and Japan. We have facilities to develop product for exploitation in the territory or we can take it and we can put it up any distribution channel and benefit the program and its creators". He mentions Microillusions, an Activision affiliate which concentrates on Amiga programs.

"That association was brought about because of our strengths in the United States, which they recognise, but also because the largest market in the world for the Amiga computer is Europe, and we were able to offer that to them. They have an incredible range of products both in the UK entertainment software and in terms of the Photon range. The breadth of their catalogue is very deep and it's something we can bring to Amiga owners and satisfy all types".

In the manner of international corporations, Activision is far more than a computer label, which is why Bruce Davis, the company president, changed its name to Mediagenic in May, 1988. This is the corporate umbrella for the many and diverse divisions that cover both the entertainment and business and presentation tool fields. There's also a distinction between the labels Activision owns and its affiliated publishers.

"Infocom was a corporate acquisition of ours, and a significant one at that. We own a direct mail distribution company in the States called Triton. We have recently acquired a company at the relatively


Martyn Oliver is production coordinator

high end of business software for MSdos users, Z Soft. We have our in-house sports label, Gamestar. We have the presentation tools label which is called Ten Point O and, of course, Electric Dreams.

"Now on top of that we have affiliated publishers, some of which are familiar to people over here, some are not. They include Microillusions, Sierra On Line, and System 3 in this country. There's New World Computing in the US, where we distribute Lucasfilm. In Japan we distribute Access."

As if this wasn't enough, Activision has just announced two new labels for the UK. The first is Vivid Images, a group set up by the authors of Last Ninja and Last Ninja 2, John Twiddy, Mev Dinc and Hugh Riley. "They were looking for a personal profile, but we were obviously keen that they should stay with us. We therefore put together a proposal which means that we will publish Vivid Images as an affiliate publisher, and will anticipate seeing four products from them in the next 12 months".

The affiliate publisher position gives Vivid Images free range though. "It's the creative input which we don't want to stifle. When you build an organisation like this you have a number of resources and facilities which can be tapped into by those who have no desires to run a business but who have distinct ideas on where the market should be going and what they can contribute to it. And that's always exciting.

"It sometimes works, it sometimes fails, but that's the nature of this


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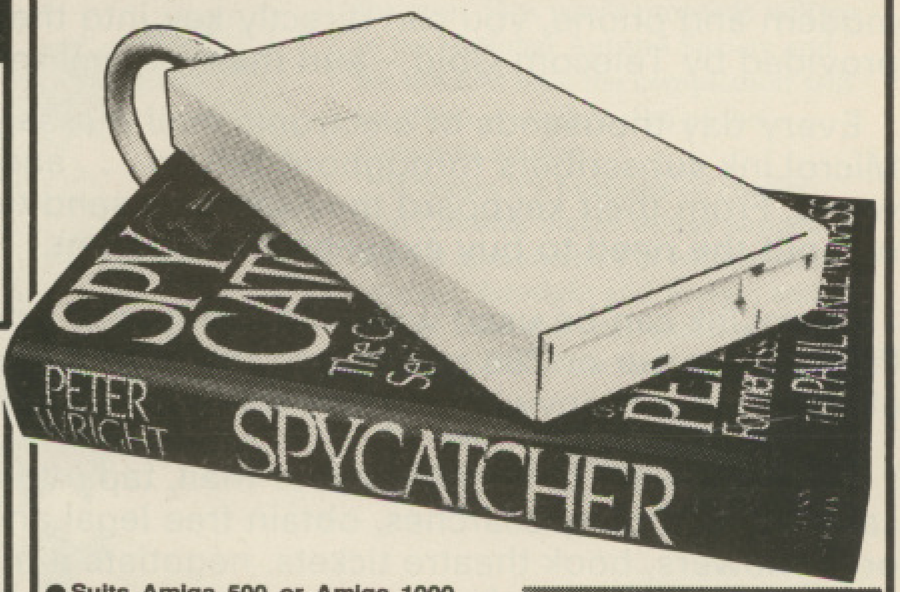
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business. I'd rather take that forward and progress all the time than sit back and look at history."

The other new label, Motion Picture House, is potentially even more revolutionary. "It can cater for individuals who may not be able to produce four to six titles a year by way of a label. This will be their flag carrier. I would be very much surprised if it's anything other than original programs. It's what those individual programmers make it. It's one thing to work for a corporation but a corporation has to work for you in terms of its flexibility. The first product will be Conqueror, the tank game based on Firebird's Virus.

"This is one of the most creative markets in the world. You only have to look at the record industry or any other entertainment industry to see that. It's an incredible source but very often it suffers from the resources and facilities so if we can contribute in any way shape or form to change that we will".

HOW, I wondered, does all this talk of originality fit in with the Activision and Electric Dream reputation for arcade conversions. Excellent arcade conversions, admittedly, but licences all the same. "I accept that entirely. What we try to achieve in developing our product mix is a balance. But to keep in business we have to be commercial.

"However, I can see a situation where the breakdown would probably be made up of 30 per cent arcade licences, 30 per cent affiliate publishers and 40 per cent original product in various categories.

"But there's no reason why a story that has worked as a film and has been relatively successful cannot be recaptured as a piece of home computer software". Rod adds. Indeed, he is just in the process of signing the UK deal for the computer version of the blockbusting movie, Who Framed Roger Rabbit. Providing nobody frames Rod the God, the program should be appearing over here in January. Rod has seen the game in the States, where the lead system was the Amiga, and reports that it looks very good.

"It's published by Buena Vista Software, which is the Walt Disney arm. That means you've got a piece of work direct from the creators of the film. They were very sensitive to the nature of the product. It's interesting that you've got a major motion picture company which cares so much about their property that it wish to control it".

The enthusiasm with which Rod expounds his view of the future makes you wonder where he finds the energy. Not only does he jet around the world, he has also found time to organise the annual In-Din industry dinner since its inception and, even more importantly, initiated the charity compilations which have helped raise computing's professional profile as well as earning money for many worthy causes.

"I thought that the industry could be part of what Bob Geldoff was doing for Ethiopia, so I proposed the idea to a number of fellow software houses who were all fairly receptive. And the result was Soft Aid which raised £350,000 for Band Aid, which I thought was an incredible achievement. It was something I was very proud of and was very grateful to everyone who participated, so we tried to make it an annual event".

Though the same level of success couldn't be expected in successive years, Off The Hook raised £75,000 for the Prince's Trust to combat drug abuse and last year the charity was the NSPCC which has already benefited to the tune of £35,000, with Rod expecting £50,000 by the end of the year. This year's proceeds will go to the National Autistic Society and for the first time the compilation will be 16 bit – another sign of the changing market.

Whether it's business or charity, Rod Cousens makes things happen. It takes a combination of enthusiasm, courage, foresight and energy, and as I leave I ask the vital question: With all that travel, how does he escape jet lag?

He laughs before he gives his simple remedy: "Sleep on the plane".



Walt Disney's Who Framed Roger Rabbit . . . the source of Activision's next blockbuster?

Plain man's guide to CLI



This month Phil South takes a look at the ED and EDIT commands, and runs up some batch files

IT is not until you find yourself using a 16 bit computer that you realise the finer points of text editors. Hold it. What's all this got to do with the CLI or AmigaDos? I know it sounds a bit odd, but on the subject of text files, nothing could be more pertinent.

When you use an 8 bit computer like all the previous Commodore machines or a Spectrum or Amstrad, the concept of batch files has never arisen. The operating system of these machines doesn't allow you to autoboot or tamper with the configuration of the machine in very many ways.

But the operating systems of the IBM PCs and their affiliates, of which the Amy and AmigaDos are the direct descendants (with a little C and Unix blended in) had a method by which text files could be stored in memory and executed like programs. What they are is just a series of Dos commands which are executed in order, as if you typed them in.

I know this sounds like the description of programming proper, but don't let's get confused. Batch files only start programs which do something, they aren't really programs themselves.

So you need to get a series of commands executed. What can you do to generate one? Well, it's a simple matter of typing out what you want the file to do, in a word processor or more properly a text editor. Wordpros tend to put control characters into the text to change type style and size or even colour.

What we need is something simpler, generating a plain Ascii file, Ascii being a standard code recognised by all computers as a representation of text characters.

Loosely, this is how modems can send information between incompatible computers. But this isn't the point, and I digress. You can get wordpros which can generate plain Ascii files, but it's usually preferable to use something a bit less complex, and believe it or not, there's a pair of programs to hand which do the trick. The ED and EDIT commands are text editors built into AmigaDos disguised as simple commands.

ED is what is called a screen editor. The file is loaded into memory and so is limited to a working space of 40,000 bytes. You can alter the working space with a keyword SIZE like so:

```
ED [FROM] <file> [SIZE<n>]
```

where n is the appropriate workspace. You don't type the brackets, I just put them there to make it clearer. Usually just:

```
ED <file>
```

does the job, opening a new file if one matching your filename doesn't exist.

You have to remember a lot of control codes to perform different functions, but if you're used to Wordstar at all, this will be a familiar

▶

Keys	Function	Keys	Function
CTRL-A	Insert line	CTRL-R	Cursor to end of previous word
CTRL-B	Delete line	CTRL-T	Cursor to end of next word
CTRL-D	Scroll the text down	CTRL-U	Scroll text up
CTRL-E	Move to top of bottom	CTRL-V	Verify screen
CTRL-F	Flip upper lower case	CTRL-Y	Delete to end of line
CTRL-G	Repeat last ESC commad	CTRL-[	Same as ESC key
CTRL-H	Delete left	CTRL-]	Cursor to end or start of line
CTRL-I	Tab cursor		
CTRL-M	Return		
CTRL-O	Delete word or space		

ED commands

◀

sensation. The table above shows the commands.

Extended or ESC commands form the backbone of the program's capabilities, however. There are a lot of them, so rather than quote them at you I'll just refer you to the AmigaDos or MetaComCo SHELL manual instead. ED is best for small docs or "read.me" messages to be TYPEd or MOREd for the information of someone using your programs.

So what about EDIT? One of the major differences between ED and EDIT is that the latter can handle source files containing binary, whereas ED can only deal with text. EDIT is, in fact, better suited to editing source files for programming, like assembly language and C, (even Amiga Basic) rather than just simple batch files.

To create a batch file, just type ED and the name you want for the file:

```
ED muffin
```

When you get into ED type:

```
echo "I Hear And Obey"
say I hear and obey
echo "The Muffin Man Is At Your Service"
say if you want muffins you can bake em
yourself baker
```

Then tap the ESCape key, and a little star will turn up at the bottom of your screen. Press x and the file will be saved and you'll exit ED. Now you could execute the Batch file called muffin, either by typing:

```
EXECUTE muffin
```

or by typing the word muffin into your s/startup-sequence file.

● *If you have any AmigaDos queries, write to Phil South, CLI Queries, Amiga Computing, 78-84 Ongar Road, Brentwood, Essex, CM15 5BG. No individual correspondance can be entered into.*

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DIGICALC

Reviewed in the December issue of Amiga Computing

At last, an inexpensive and very easy-to-use spreadsheet that's simple enough for beginners, yet sophisticated enough for professionals.

Digicalc is both menu and command driven. It is fast, with all calculations being performed instantly, and the spreadsheet is constantly updated.

The manual has been carefully designed to cater for all types of user, from the novice to the expert. It includes a tutorial with step-by-step instructions, a glossary of computer terms, a quick reference card, a full reference section and a comprehensive index.

"I really liked the package to begin with, and first impressions are important... Digita deserves full marks for the way in which the menus and command driven operations have been implemented... It's a no nonsense spreadsheet... I'd certainly recommend it for general purpose spreadsheet work". – **Rex Last, *Amiga Computing*, December 1988.**

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AMIGA Letters

Praise and problems

DAVE Eriksson is doing an excellent job ensuring at least one role-play game is reviewed every month – well done! I hope he keeps this up – Bard's Tale II and Ultima IV are out now. The artwork for the adventure sections is great.

The Silicon Underworld series is was very interesting and adds greatly to the magazine. Just because I like games and can't program in Assembly (or C for that matter) doesn't mean I can't understand it and enjoy its revelations about my most prized possession.

I would like to know whether it's safe to pour oil over the rollers in my mouse to stop it squeaking. Can this damage the ball or circuitry?

My A500 power pack occasionally buzzes. Shifting the PSU-A500 lead will make it quiet. Is this a serious problem? Should I get another one?

Brian Phillips,
Rainham, Essex.

Take your mouse apart carefully and only put the tiniest bit of oil on the bearings. If you get oil on the ball it won't go round properly, and if you block the vanes on the rollers you will lose an axis. You may find that just taking the mouse apart, cleaning out the fluff and rebuilding the mouse cures your problems. A buzzing PSU is not really serious, but get a dealer to have a look at it.

Kickstart memories

I HAVE discovered something that will delight owners of the old Kickstart V1.1. Having just bought Interceptor I was shocked to find that it didn't work on my Amiga 1000 because of its primitive Kickstart.

To my relief, I eventually managed to run it faultlessly by loading it via Workbench.

I have not tried this as yet on any other such programs but, if just for playing Interceptor, I feel it is a worthwhile piece of knowledge for all of us primeval Amiga users.

Paddy Hood,
Henley-On-Thames, Oxon.

You should look at getting your Kickstart upgraded. A good dealer should be able to supply you with 1.2 and Commodore (0628 770088) will have stocks of the new 1.3 shortly.

Starglider slug

WHY is the ST Starglider II faster than the Amiga's? In the preview (issue 1) you said the blitter chip would make up for the slower clock frequency (or whatever). The blitter IS being used isn't it?

Incidentally if both computers have 68000 processors why does the ST's processor run at 8MHz and the Amiga's at 7.14MHz? Any simple explanations?

Omar Al Farooq,
Ilford,Essex.

The reason that ST StarGlider is a mite faster, and it isn't really a noticeable difference, is that the ST runs faster. The Amigas custom chips need the system to be that shade slower so that they can cope with their jobs.

For the routines that StarGlider uses it is faster to draw shapes in software than by using the blitter, so the blitter is only used for clearing the screen.

Give it some stick

ARE all joysticks generally interchangeable between micros, or is the choice more limited? Would the choice of be determined by the application or is there one all round type that would be suitable for use with all or most programs on the Amiga that require a joystick?

I understand that there are at least two operating principles for joysticks. Which gives the best results?

Robert Macpherson,
Tain, Ross-shire.

Except for IBM users and a couple of other odd machines, joysticks all have a standard 9 pin connector. This means that the same joystick can be used on an Amstrad, Atari, C64 or Amiga.

The main mechanical principals are leaf spring and microswitch. Leaf springs are harder wearing and often used in arcade machines.

Microswitches are more sensitive and better for home use. It is a matter of taste which joystick you like to use.

A quick survey of games players in the Amiga Computing *office came to the conclusion that the Ram Delta is the best desk mounted stick, while a Konix Speedking and Konix Navigator are the best hand-held joysticks around.*

Black mark

THIS letter is to enlighten all those unlucky people (like me) who got a mono LC-10 before the colour version came out. But just think – they have to pay a fortune for their printer ribbons. Unfortunately, we too have to pay out for ribbons, and at six quid a time it isn't cheap. Luckily I have devised a way of re-inking them by using stamp pad ink. This might also work for other printers but don't blame me if it does not.

Arthur Wyatt,
Meppershall, Beds.

Oh no you don't. The ink used on ribbons is specially formulated. Stamp pad ink will work to start with,

▶

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◄

but it may also gum up the pins and burn out the print head.

Some companies re-ink ribbons and do a good job of it providing you have not worn the ribbon's fabric. We would recommend you contact Aladdink (08907) 50965.

Perfect points

WHAT a horrible letter from P. Kenton (September edition). Now it may well be that he is one of the fortunate few who never miss anything when reading instruction manuals, and in that I envy him, but to hit out at people who do miss something in such an arrogant manner is just not on.

I hope the editorial team will agree with me when I say that this excellent magazine is meant to interest and encourage all users of the Amiga, and not just those like P. Kenton, who is, of course, perfect.

A.T.S. Henderson, Watton, Norfolk.

Growing Amiga

THE technical specification for the A500 states that it is expandable internally to 1Mb and externally to 9Mb. It also states that a hard disc can be added through the same expansion port. Can all of these options be used together?

I can see the possibility that I may wish to expand the memory beyond 1Mb at some point, but as this and a hard disc are the only expansions I envisage, I am reluctant to pay the extra for the 2000 model. Are the expansions I have mentioned practical on the A500?

One of the main uses I intend for the machine is word processing. Would you still recommend WordPerfect as the best package?

In the September issue you mentioned an A590 machine,in the review of sub-system. What will be different about this machine and is it worth me putting off buying an A500 for?

James T. Gathercole, Grays, Essex.

The A590 is an expansion box to be added to an A500, Commodore UK has not even seen a prototype. It is not imminent. You can expand the A500 beyond 1Mb by using the Spirit inboard. Ram prices mean that expansion boards sell very slowly and so they are hard to get hold of. You could look at this and a Supra hard disc, which is probably the neatest solution for an A500 owner, or the sub-system mentioned in the September issue. But you really should take a second look at the A2000.

It allows you to use Commodore's A2090 disc controller, which is probably the best around, and offers direct memory access which is very fast. You can also add memory much more easily. As a full system of an A2000 with 3Mb ram and a hard disc the bigger Amiga does not work out any more expensive than an A500 similarly expanded.

WordPerfect has a fine pedigree, but Protext looks to be a good alternative. It is new and needs some debugging but I use it in preference to WordPerfect. And it is half the price.

AMIGA Letters

New monitor

I was about to buy an Amiga 500 and 1084 monitor when I read a brief mention in your Amiga Scene of a new monitor, the A2024. I am now wondering if it would be worthwhile my waiting for it to come out.

Could you give me some idea of how superior it is to the 1084, and is there any (even very rough) indication of its likely price?

P. Bennett, St. Albans, Herts.

The A2024 is a black and white hi-resolution monitor. It is ideal for desktop publishing and word processing, but is best used in addition to a 1084. Amiga Computing's *guess at the price would be over £1,000 – although this is purely a guess based on it having a lot of complicated circuitry and expensive ram in the design.*

Beebulator

THE review of the BBC emulator on page 8 of the October issue of *Amiga Computing* states that the product would emulate the whole of the BBC Micro and its operating system. Could I run my own programs that are on 5.25in DFS discs if I had a 5.25in drive coupled up to an Amiga?

I have quite a lot of records and data on disc and if I cannot access this information I would have the task of printing out the data and programs. This also brings me to the point that if the emulator was installed, could I load a rom image, of say, my word processor so as to get to my letters?

G. Readman, Redditch, Worcs.

*The BBC emulator is designed to run Basic programs. It will emulate machine code, but will be fairly slow. To get a program from a BBC Micro to an Amiga it is easier to wire the Beeb to the Amiga and use a *CONNECT command in Commodore's emulator. Legal programs will run. You don't say which word processor you have. Assuming it is Wordwise, you should contact Computer Concepts about the disc version for the Archimedes. It has not been tested but will probably work.*

Shop or post

I HAVE seen A500s advertised in your mail order adverts for £50 cheaper than the normal price. What is the snag? Would you recommend purcha..ng from a local store even though they are more expensive?

R. Reeves, Northampton.

If you can find a good local shop – and that's a big if, some local shops are dreadful – then it is worth paying the extra for the help and advice you will get when you want to buy peripherals. If not, buy by post and save the dosh.

Logoff

I HAVE a Voyager 7 modem from Modem House which I purchased from Boots to use originally with my Spectrum 128.

I have since sold this machine and bought an Amiga A500. I still have the modem and would like to use it with my Amiga. But I have lost the instructions for it and do not have an appropriate lead to connect it to the computer anyway.

Is there anybody out there with one of these modems and is it possible to connect it to an Amiga? Also has anybody a spare copy of the instructions for this machine? I would be very thankful.

A. O'Neil, Canley, Coventry.

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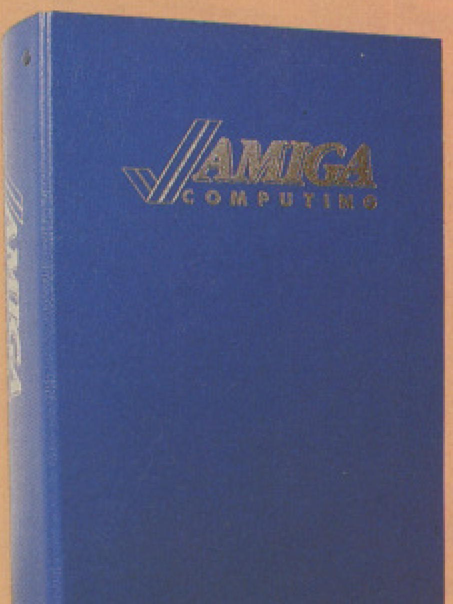


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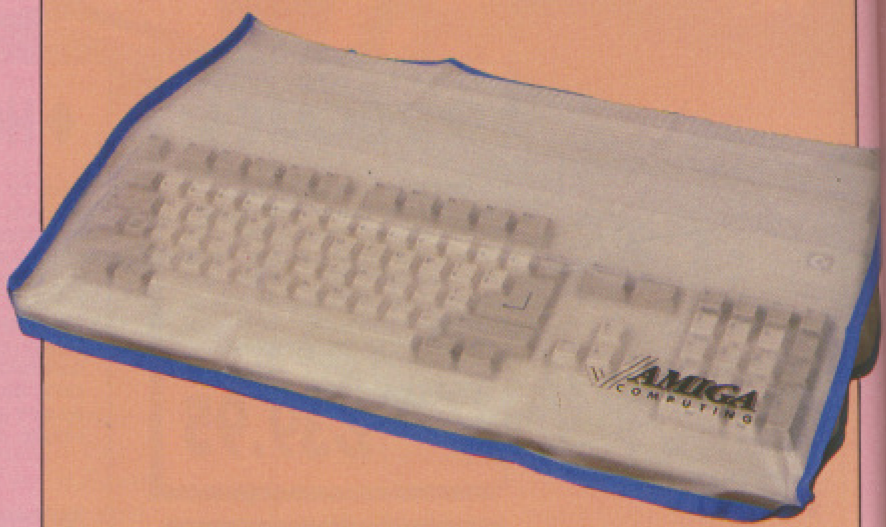
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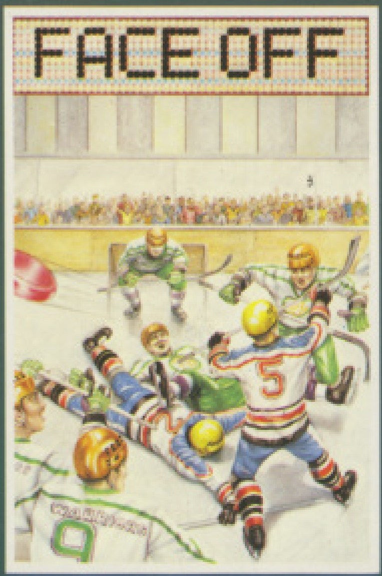
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